

# STIC Search Report Biotech-Chem Library

# STIC Database Tracking Number: 194666

TO: Minh-Tam Davis Location: 3a24 / 3c18 Thursday, July 06, 2006

Art Unit: 1642

Phone: 571-272-0830

Serial Number: 09 / 403440

From: Jan Delaval

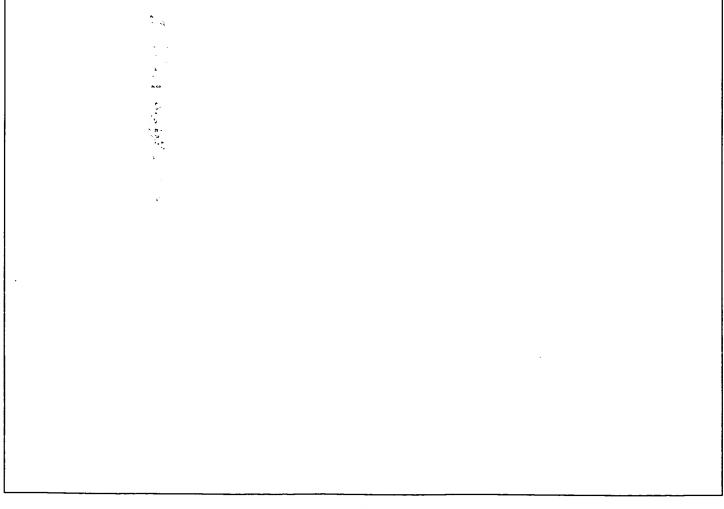
**Location: Biotech-Chem Library** 

Remsen 1a51

Phone: 571-272-2504

jan.delaval@uspto.gov

### Search Notes





THIS PAGE LEFT BLANK

From:

Chan, Christina

Sent:

Wednesday, July 05, 2006 9:56 AM

To: Subject:

Davis, Minh-Tam; STIC-Biotech/ChemLib RE: Rush search request for 09/403440

Pleasemush Thanks Chris

Chris Chan

TC 1600 New Hire Training Coordinator and SPE 1644 (571)-272-0841 Remsen, 3E89

-----Original Message-----

From:

Davis, Minh-Tam

Sent:

Monday, July 03, 2006 11:37 AM

To:

Chan, Christina

Subject:

Rush search request for 09/403440

Please search in commercial database, issued patent files and PGUB:

The peptide SEQ ID NO:2, with and without size limitation for the sequences in the database to the size of SEQ ID

NO:2.

Thank you.

MINH TAM DAVIS

ART UNIT 1642, ROOM 3A24, MB 3C18

272-0830

Searcher:\_\_ Searcher Phone:\_ Date Searcher Picked up: 71<106 Date completed: 716106 Searcher Prep Time:\_ Online Time:\_

Type of Search									
NA#	AA#:_ <u>\</u>								
S/L:	Oligomer:								
Encode/	Transl:								
Structure	#:Text:								
Inventor	Litigation								

**********	
Vendors and cost where applicable	
STN:	
DIALOG:	
QUESTEL/ORBIT:	
LEXIS/NEXIS:	_
SEQUENCE SYSTEM:	
WWW/Internet:	
Other (Specify):	

THIS PAGE LEFT BLANK

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö.
   Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d. No. is the number of results predicted by chance to have a
re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
                                                                                                                                                          51.5
51.5
50
50
50
48
48
48
                                                     46.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seq
geq
                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIR_80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 283416 segs, 96216763 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 PPLSQETFSDLWKLLPENG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 July
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gapop 10.0 ,
 US-09-403-440A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5, 2006, 22:41:06; Search time 39 Seconds
 GenCore version 5.1.9 (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gapext 0.5
DNHU53
S06594
S51648
J51648
J51648
J51648
J61633
A29376
J61631
S02192
J61631
S28631
S28631
S28631
S28671
S29671
S2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (without alignments)
46.875 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                283416
                                                                                                                                                                                                                                                          cellular tumor ant cellular tumor ant tumor auppressor p cellular tumor ant glutamate receptor glutamate receptor grecorrin-2 methyl
                                                                                                                      methyltransferase outer cell wall pr coat protein - pep hypothetical prote hypothetical prote
                                                                                                                                                                                                            racemase (imported Similar to Flavono major intracellula
                                 hypothetical prote
hypothetical prote
hypothetical prote
                                                                                    oxysterol-binding isoleucine-tRNA li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cellular tumor ar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
                i-hydroxybenzoate
```

```
A;Molecule type: DNA
A;Rosidues: 1-393 <LAN>
A;Cross-references: UNIPROT:P04637; UNIPARC:UPI000006F8F0; EMBL:X01405; GB:M13121;
A;Cross-references: UNIPROT:P04637; UNIPARC:UPI000006F8F0; EMBL:X01405; GB:M13121;
R;Buchman, V.L.; Chumakov, P.M.; Ninkina, N.N.; Samarina, O.P.; Georgiev, G.P.
Gene 70, 245-252, 1988
A;Title: A variation in the structure of the protein-coding region of the human p53
A;Reference number: JT0436; MUID:89108008; PMID:2905688
A;Accession: A43073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rile Goas, F.; May, P.; Ronco, P.; de Fromente1, c.c. Gene 185, 169-173, 1997

A;Title: cDNA cloning and immunological characterization A;Reference number: JC6193; MUID:97208869; PMID:9055811

A;Accession: JC6193
                                                                                                                                                                                                                                                                                                                       R;Lamb, P.; Crawford, L.
MOl. Cell. Biol. 6, 1379-1385, 1986
A;Title: Characterization of the human p53 gene.
A;Reference number: A25224; MUID:87064416; PMID:2946935
                                                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Homo sapiens (man)
C;Date: 05-Oct-1988 #sequence revision 18-Nov-1994 #text change 09-Jul-2004
C;Date: 05-Oct-1980 #sequence revision 18-Nov-1994 #text change 09-Jul-2004
C;Accession: A25224; A43073; JT0436; S40773; S42669; A22837; A55060; A25397; B25397;
4905; I58354; I78850; I52681; S60153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cellular tumor antigen p53 [validated] - human
N,Alternate_names: cellular phosphoprotein p53; oncoprotein p53; transformation suppres
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: mRNA
A;Residues: 1-391 <LEA>
A;Cross-references: UNIPROT:Q95330; UNIPARC:UPI0000131047; EMBL:X90592; NID:g1532043;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumor suppressor p53 - rabbit
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 11-Apr-1997 #sequence_revision 09-May-1997 #text_change 09-Jul-2004
                         A; Molecule type: DNA
A; Residues: 1-393 <BUC1>
                                                                                                                                                                                                                                                                                                 A;Accession: A25224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Keywords: tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Gene: p53
C;Superfamily: cellular tumor antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C; Accession: JC6193
A;Cross-references: UNIPARC:UPI000006F8F0; EMBL:M22898; NID:g189474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94.3%; ---
100.0%; Pr
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 99; DB:
;; Pred. No. 3.2:
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2; L
3.2e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ,.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rabbit p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                     p53
```

שי

မ္မ

ž

S4

gen

```
A;Cross-references: UNIPARC:UPI000002ED67; EMBL:X02469; EMBL:M60950; NID:g35209; R;Harlow, E.; Williamson, N.M.; Ralston, R.; Helfman, D.M.; Adams, T.E. Mol. Cell. Biol. 5, 1601-1610, 1985
A;Title: Molecular cloning and in vitro expression of a cDNA clone for human cell A;Reference number: A55060; MUID:85267676; PMID:3894933
A;Accession: A55060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Accession: JT0436
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-71, 'P', 73-393 <BUC2>
A;Cross-references: UNIPARC:UDI00002ED67; EMBL:M22898; NID:g189474; PIDN:AAA59988.1;
A;Note: this 72-Pro allele was found in both normal and malignant cell lines
A;Chumakov, P.M.; Almazov, V.P.; Jenkins, J.R.
submitted to the EMBL Data Library, August 1990
A;Reference number: S40773
A;Accession: S40773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Residues: 1-71,'P',73-78,'T',80-393 <HAR2>, Forest dues: 1-71,'P',73-78,'T',80-393 <HAR2>, FOREST references: UNIPARC:UPI0000031A30; EMBL:M14695; NID:g339815; PIDN:AAA61212.1; A;Experimental source: cflone p53-H-19, transformed hybridoma SV-80 cell line R;Matlashewski, G.J.; Tuck, S.; Pim, D.; Lamb, P.; Schneider, J.; Crawford, L.V. Mol. Cell. Biol. 7, 961-963, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Molecule type: mRNA
A;Residues: 1-71, 'p',73-272, 'H',274-393 <HAR>
A;Residues: 1-71, 'p',73-272, 'H',274-393 <HAR>
A;Cross-references: UNIDARC:UDIO00014ABB2; GB:K03199; NID:g189478;
A;Experimental source: clone pR4-2, cell line A431
R;Harris, N.; Brill, E.; Shohat, O.; Prokocimer, M.; Wolf, D.; Arai
Mol. Cell. Biol. 6, 4650-4656, 1986
Mol. Cell. Biol. 6, 4650-4656, 1986
A;Title: Molecular basis for heterogeneity of the human p53 protein
A;Reference number: A93086; MUID:87089826; PMID:3025664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Residues: 101-393 <MKI1>
A;Residues: 101-393 <MKI1>
A;Cross-references: UNIPARC:UPI000016AB44; EMBL:X01405; NID:g35215;
R;Zakut-Houri, R.; Bienz-Tadmor, B.; Givol, D.; Oren, M.
R;Zakut-Houri, R.; Bienz-Tadmor, B.; Givol, D.; Oren, M.
EMBO J. 4, 1251-1255, 1985
A;Title: Human p53 cellular tumor antigen: cDNA sequence and express A;Reference number: A22837; MUID:85230577; PMID:4006916
                              A;Reference number: I38082; MUID:92007731;
A;Accession: I38082
                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA; DNA
A; Residues: 66-79 < MKI3>
                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: UNIPARC:UPI00001739B5
A;Experimental source: Clone lambda C113
A;Note: 72-Cys was also found, and appear:
A;Accession: S42453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Molecule type: mRNA
A;Residues: 1-78,'T',80-393 <HARl>
A;Residues: 1-78,'T',80-393 <HARl>
A;Cross-references: UNIPARC:UPI000014409D; EMBL:M14694; NID:g339813; PIDN:AAA61211.1;
A;Experimental______
Clone p53-H-1, transformed hybridoma SV-80 cell line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Note: this 72-Arg allele appears to be about 5 times more frequent than the 72-Pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Accession: B25397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Reference number: S42669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Matlashewski, G.; L
EMBO J. 3, 3257-3262,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: UNIPARC:UPI000006F8F0; EMBL:X54156; NID:g35213; PIDN:CAA38095.1; R;Matlashewski_G_; Lamb, P.; Pim, D.; Peacock, J.; Crawford, L.; Benchimol, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Residues: 1-393 <CHU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;Title: Primary structure polymorphism at amino acid residue;Reference number: S42452; MUID:87144273; PMID:3547088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;Title: Isolation and characterization of a human p53 cDNA clone: ;Reference number: S42669; MUID:85126934; PMID:6396087
                                                                                                         Title: p53 is frequently mutated in Burkitt's lymphoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Molecule type: mRNA
                                                                                                                                       Experimental source: clone J6K Farrell, P.J.; Allan, G.J.; Shanahan, BBO J. 10, 2879-2887, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;Molecule type: mRNA; DNA
;Residues: 66-71,'P',73-79 <MKI2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Accession: S42452
                                                                                                                                                                                                                                                   Cross-references: UNIPARC:UPI00001739B6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Molecule type: mRNA
Residues: 1-71,'P',73-393 <ZAK>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Accession: A22837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Accession: S42669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Accession: A25397
translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     O.; Prokocimer, M.; Wolf, D.; Arai,
                                                                                                                                                                                                                                                                                                                                                                                              appears
                                                                                                                                                                            'T]
                                                                                                                                                                                                                                                                                                                                                                                              ç
                                                                                                                                                                                Vousden, K.H.; Crook,
                                                                                                                                                                                                                                                                                                                                                                                              represent a polymorphism
                                                                                                            cell lines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of human p53
                                                                                                                                                                                Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        expression of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIDN: AAA59989.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIDN:CAA25652.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cellular tu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIDN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIE
```

```
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-212,'Q',214-393 <F10>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A,Status: translated from GB/EMBL/DDBJ
A,Molecule type: mRNA
A,Residues: 1-247,'Q',249-393 <F06>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-393 <F03>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Accession: I38083
A;Status: translated from GB/EMBL/DDBJ
A; Reference number: A44905;
A; Accession: A44905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: I38084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: mRNA
                                                                                                                                                                                                   A;Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                       A;Accession: I38093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: I38092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Accession: I38091
                                                                                                                                                    A;Residues: 1-393 <FUT>
                                                                                                                                                                         A; Molecule type: DNA
```

A; MOLECULE type: mRNA A; ROESIQUES: 1-189, 'LLSILSEWKEICVWSIWMTETLFDIVWWCPMSRLRLALT', 'VPPSTTTTCVTVPANAA' <F01> A; Cross-references: UNIPARC: UPI000011F824; EMBL: X60010; NID: 9506432; PIDN: CAA42625.1; A; Note: deletion of a C nucleotide causes a frameshift at position 566 ΡI

A; Residues: 1-192, 'R', 194-393 <F02>
A; Cross-references: UNIPARC: UPI0000070FCE; EMBL:X60011; NID:g506434; PIDN:CAA42626.1;

PI

A; Cross-references: UNIPARC: UPI000006F8F0; EMBL:X60012; NID:g506436; PIDN: CAA42627.1;

A;Accession: I38085 A;Status: translated from GB/EMBL/DDBJ

A; Molecule type: mRNA A; Residues: 1-245, 'T', 247-393 <F04>

A;Cross-references: UNIPARC:UPI000006CFA4; A;Accession: 138086 A;Status: translated from GB/EMBL/DDBJ EMBL:X60013; NID:g506438; PIDN: CAA42628.1;

A; Molecule type: mRNA A; Residues: 1-236,'I', 238-393 <F05>

A;Cross-references: UNIPARC:UPI0000072EB7; A;Accession: I38087 EMBL: X60014; NID:g506440; PIDN:CAA42629.1;

ΡI

Ы

PI

A;Cross-references: UNIPARC:UPI0000072FD4; A;Accession: I38088 EMBL:X60015; NID:g506442; PIDN: CAA42630.1; PI

A;Status: translated from GB/EMBL/DDBJ <F07>

A;Molecule type: mRNA A;Residues: 1-71,'P',73-237,'Y',239-393 <F( A;Cross-references: UNIPARC:UPI000006EDFC; A;Accession: 138089 A;Status: translated from GB/EMBL/DDBJ EMBL: X60016; NID: g506444; PIDN: CAA42631.1;

A;Status: translated from GB/EMBL/DDBJ A;Molecule type: mRNA A;Residues: 1-247,'Q',249-393 <F08> A;Cross-references: UNIPARC:UPI0000072FD4; A;Accession: I38090 EMBL:X60017; NID:g506446; PIDN: CAA42632.1;

P

ΡŢ

A;Status: translated from GB/EMBL/DDBJ A;Molecule type: mRNA A;Residues: 1-71,'P',73-162,'H',164-393 <F09> A;Cross-references: UNIPARC:UPI000007055C; EMB

EMBL: X60018; NID: g506448; PIDN: CAA42633.1;

A;Cross-references: UNIPARC:UPI00000701E7; EMBL: X60019; NID: g506450; PIDN: CAA42634.1;

A,Status: translated from GB/EMBL/DDBJ A,Molecule type: mRNA A,Residues: 1-253,'D',255-393 <F11> A;Cross-references: UNIPARC:UP1000006E77E; EMBL:X60020; NID:g506452; PIDN:CAA42635.1; A;Note: all sequences submitted to the EMBL/GenBank/DDBJ databases June 1991

2

Ę

ΡI

R;Putreal, P.A.; Barrett, J.C.; Wiseman, R.W. Nucleic Acids Res. 19, 6977, 1991 A;Title: An Alu polymorphism intragenic to the TP53 gene A;Reference number: I38093; MUID:92107726; PMID:1762941

A;Cross-references: UNIPARC:UPI000006F8F0; EMBL:X54156; NID:g35213; PIDN:CAA38095.1; R;Yamada, Y.; Yoshida, T.; Hayashi, K.; Sekiya, T.; Yokota, J.; Hirohashi, S.; Nakata Cancer Res. 51, 5800-5805, 1991

Nakatani

PII

A; Title: p53 gene mutations in gastric cancer MUID:92034678; PMI PMID:1933850 in

A;Nolecule type: DNA
A;Nolecule type: DNA
A;Residues: 246-247, 'W',249-250 <YAM>
A;Residues: 246-247, 'W',249-250 <YAM>
A;Residues: 246-247, 'W',249-250 <YAM>
A;Cross-references: UNIPARC:UPI000011E80C; GB:S63157; NID:g237829; PIDN:AAB20140.1;
A;Cross-references: UNIPARC:UPI0000011E80C; GB:S63157; NCBIP:63158) PID

P

```
RESULT
S51648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule type: mRNA
A;Rosidues: 327-331, 'QTGSFQKENC' <CHO>
A;Residues: 327-331, 'QTGSFQKENC' <CHO>
A;Residues: 327-331, 'QTGSFQKENC' <B:S66666; NID:g436292; PIDN:AAB28601.1; PID:A;Note: mutant sequence with altered splicing and termination expressed in Molt-4 T-lymp R;Petersen, G: Song, D: Huegle-Doerr, B:; Oldenburg, I:; Bautz, E.K.F.
Mol. Gen. Genet. 249, 425-431, 1995
Mol. Gen. Genet. 249, 425-431, 1995
A;Title: Mapping of linear epitopes recognized by monoclonal antibodies with gene-fragme A;Reference number: S60151; MUID:96133682; PMID:8552047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: DNA
A;Residues: 274-277,'S',279-282 <HEN2>
A;Residues: 274-277,'S',279-282 <HEN2>
A;Coss-references: UNIPARC:UPI000011F7CD; GB:S41977; NID:g1679932; PIDN:AAB19325.1;
R;Chow, V.T.; Quek, H.H.; Tock, E.P.C.
Cancer Lett. 73, 141-148, 1993
A;Title: Alternative applicing of the p53 tumor suppressor gene in the Molt-4 T-lymphc A;Reference number: I52681; MUID:94036762; PMID:8221626
A;Accession: I52681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 244-247, 'W', 249-252 <HEN1>
A; Cross-references: UNIPARC: UPI000011F7CC; GB:S41969;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Note: mutation from a liver metastasis of a gastric cancer R;Hensel, C.H.; Xiang, R.H.; Sakaguchi, A.Y.; Naylor, S.L. Oncogene 6, 1067-1071, 1991
A;Title: Use of the single strand conformation polymorphism technique and A;Reference number: IS8354; MUID:91296386; PMID:1648702
A;Accession: IS8354
                                                                                밁
                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: UNIPARC:UPI00001739B7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: 178850
                                                                                                                                                                                                                                       ;Cross-references: UNIPROT:p13481; UNIPARC:UPI0000131039; EMBL:X16384; NID:g22795; PIDN ;Superfamily: cellular tumor antigen p53 
;Superfamily: cellular tumor antigen p53 
;Keywords: apoptosis; cell division control; DNA binding; homotetramer; nucleus; phosph ;176,179,238,242/Binding site: zinc (Cys, His, Cys, Cys) #status predicted ;392/Binding site: phosphoryl-RNA (Ser) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Accession: S60153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Residues: 3-44 <PET>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12
                                                                                12
                                                                                                                        μ
                                                                                                                                                                 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                     Similarity
                                                                                                                        PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29
                                                                              29
                                                                                                                                                                                   Score 99; DB 1;
; Pred. No. 3.2e-(
                                                                                                                                                               ,
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 99; DB 1; I
Pred. No. 3.2e-07;
                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                   .2e-07
                                                                                                                                                                                                    Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NID:g1679931; PIDN:AAB19324
                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the Molt-4 T-lymphobl
                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCR to
                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            detect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>.</u>1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PII
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Gene: p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                    Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12
                                                                                                                                                                                                                                                                                                                                                                      N
                                                                                                                                                                                                                                                                                                                                                                                                                  16;
```

```
C;Accession: JH0633
R;Legros, Y; McIntyre, P.; Soussi, T.
Gene 112, 247-250, 1992
A;Title: The cDNA cloning and immunological
A;Reference number: JH0633; MUID:92210007;
                                         A; Reference number: A; Accession: JH0633
                                                                                                                                                                             cellular tumor antigen p53 - golden hamster
N;Alternate names: tumor-suppressor protein p53
C;Species: Mesocricetus auratus (golden hamster)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: mRNA
A;Residues: 1-393 <LEES
A;Cross-references: UNIPROT:O09185; UNIPARC:UPI0000170734; GB:U50395; NID:g1842229; PID:
C;Comment: This protein is a multimer, it plays the central role in a complex DNA damagi
iption, and recombination by protein/protein interactions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Lee, H.; Larner, J.M.; Hamlin,
Gene 184, 177-183, 1997
A;Title: Cloning and characteriz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: UNIPROT:Q29628; UNIPARC:UPI0000131035; EMBL:X81704; NID C;Superfamily: cellular tumor antigen p53 C;Keywords: apoptosis; cell division control; DNA binding; homotetramer; pho F;168,171,231,235/Binding site: zinc (Cys, His, Cys, Cys) #status predicted F;385/Binding site: phosphoryl-RNA (Ser) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Accession: S51648
R;Dequiedt, F.; Willems, L.; Burny, A.; Kettmann, submitted to the EMBL Data Library, September 1994
A;Description: Nucleotide sequence of the ovine p5
A; Molecule type: mRNA
A; Residues: 1~396 < LE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Reference number: JC6176;
A;Contents: liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Criceturus graseus (C;Date: 11-Apr-1997 #sequence_revision
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-386 <DEQ>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: JC6176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Accession: JC6176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tumor suppressor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Reference number: S51648
A;Accession: S51648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cellular tumor antigen p53 - bovine N;Alternate names: tumor-suppressor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;Superfamily: cellular tumor antigen p53;Keywords: liver; tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;Alternate names: tumor-suppressor protein p53;Species: Bos primigenius taurus (cattle);Date: 10-Sep-1999 #sequence_revision 10-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ressor protein p53 - Chinese hamster
Cricetulus griseus (Chinese hamster)
-Apr-1997 #sequence_revision 09-May-1997
                                                                                                                                                                                                                                                                                                                                                                            13 PLSQETFSDLWKLLPPN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       l Similarity
17; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                     PLSOETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        characterization of Chinese hamster JC6176; MUID:97183659; PMID:9031625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             89.5%;
                                                                                                                                                                                                                                                                                                                                                                         29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 86;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 94; DB 1;
Pred. No. 1.8e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                    characterization PMID:1555773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       p53 tumor-suppressor gene cDNA and its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     تح.
                                                                                                                                                                                #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                        0f
                                                                                          hamster
                                                                                                                                                                                       09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                        p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NID:g602332;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             phosphoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

ď

```
C;Species: Xenopus laevis (AIrIcan Clarco Larco Larco C;Species: Xenopus laevis (AIrIcan Clarco Larco Larco C) and characterization 10-Sep-1999 #text_change 09-Jul-2004 (C;Accession: A29376; S61531; S72313; I51639 R;Soussi, T.; de Fromentel, C.C.; Mechali, M.; May, P.; Kress, M. Oncogene 1, 71-78, 1987 Oncogene 1, 71-78, 1987 A;Title: Cloning and characterization of a CDNA from Xenopus laevis coding A;Title: Cloning and characterization of a CDNA from Xenopus laevis coding A.Paference number: A29376; MUID:88143684; PMID:2830576
                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Gene: p53
C;Superfamily: cellular tumor antigen p53
C;Keywords: apoptosis; cell division control; DNA binding; homotetramer; nucleus; C;Keywords: apoptosis; cell division control; DNA binding; homotetramer; nucleus; F;150,153,213,217/Binding site: zinc (Cys, His, Cys, Cys) #status predicted F;362/Binding site: phosphoryl-RNA (Ser) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: UNIPROT:Q00366; UNIPARC:UPI0000131042; GB:M75144; NID:g191414; PIDN: A;Experimental source: kidney, strain MP1 C;Genetics: A;Genetics: A;Gene: p53 C;Superfamily: cellular tumor antigen p53 C;Superfamily: cellular tumor antigen p53 C;Keywords: apoptosis; cell division control; DNA binding; homotetramer; nucleus; phosph F;179,182,241,245/Binding site: zinc (Cys, His, Cys, Cys) #status predicted F;395/Binding site: phosphoryl-RNA (Ser) (covalent) #status predicted
                                                                       cellular tumor antigen p53, minor splice form - mou c;Species: Mus musculus (house mouse) C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 C;Accession: $38824; $35478 R;Arai, N.; Nomura, D.; Yokota, K.; Wolf, D.; Brill
                                                                                                                                                                                                  RESULT
S38824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Accession: S72313
A;Molecule type: mRNA
A;Residues: 1-51,'S',53-70,72-293,295-363
A;Cross references: UNIPARC:UPI0000171595;
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: UNIPARC:UPI0000171479; EMBL:X77546; NID:9468513; PIDN:CAA54672.1; R;Hoever, M.; Clement, J.; Wedlich, D.; Montenarh, M.; Knochel, W. submitted to the EMBL Data Library, March 1994
A;Reference number: S72313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Title: Overexpression of wild-type p53 interferes with A;Reference number: I51639; MUID:94134403; PMID:8302570 A;Accession: S61531 A;Accession: S61531 A;Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Reference number: A29376;
A;Accession: A29376
A;Molecule type: mRNA
A;Residues: 1-363 <SOU>
R;Arai, N.; Nomura, D.; Yokota, K.; Wolf, D.; Brill, E.; Shohat, Mol. Cell. Biol. 6, 3232-323, 1986 Mol. Cell. Biol. 6, 3232-3239, 1986 A;Title: Immunologically distinct p53 molecules generated by alteA;Reference number: S38822; MUID:87064640; PMID:3023970
                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Hoever, M.; Clement, J.I
Oncogene 9, 109-120, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cellular tumor antigen p53 - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Molecule type: mRNA
Residues: 1-293,295-363 <HOE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cross-references: UNIPROT: P07193; UNIPARC: UPI000013104D; EMBL: X0 Hoever, M.; Clement, J.H.; Wedlich, D.; Montenarh, M.; Knoechel,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                     11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N
                                                                                                                                                                                                                                                                                                                                                 1 PPLSQETFSDLWKLLPE 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16;
                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLSQETFSDLWKLLPPN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                        77.1%;
82.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81.9%;
94.1%;
                                                                                                                                                                                                                                                                                                     27
                                                                                                                                                                                                                                                                                                                                                                                                 ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                           Score 81; I
Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 86;
                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No. 3e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <HOW>
; EMBL:X77546; NID:g468513; PIDN:CAA54672.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                           .00016;
                                                                                                                                                                           mouse
                                                                                                                        #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 396;
                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             normal development
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BMBL:X05191;
noechel, W.
                            alternative splicing
                                                                                                                          23-Jul-1999
                                                                          O.; Rotter,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NID:g64961;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in
                                                                            <
                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ים
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Note: the nucleotide sequence was C;Comment: This sequence, produced be not known.
C;Superfamily: cellular tumor antige C;Keywords: alternative splicing; ph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;114-139/Region: conserved region F;160-192/Region: L2 loop F;168-178/Region: conserved region F;231-252/Region: conserved region F;233-248/Region: L3 loop F;267-283/Region: conserved region
                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-134, 'V', 136-390 <BIE>
A; Cross-references: UNIPROT: P02340;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F;173,176,433,445.
F;312/Binding site: phosphate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Accession: S38824
A;Molecule type: mRNA
A;Residues: 1-381 <ARA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R; Han, K.A.; Kulesz-Martin, M.F
                                                                                              R; Zakut-Houri, R.; Oren,
Nature 306, 594-597, 198
                                                                                                                                                                           A;Molecule type: mRNA
A;Residues: 1-134,'V',136-390 <CHU>
                                                                                                                                                                                                                         A;Status: not compared with conceptual
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cellular tumor antigen p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               F;108-121/Region: L1 loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F;99-289/Domain: DNA-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;16-26/Region: conserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: S35478
                                                                                                                                                                                                                                                                                                                                                   R;Chumakov, P.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNMS53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ø
     type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 PLSQETFSDLWKLLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PLSQETFSGLWKLLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   70.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  region 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Ser)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Y II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             H
```

```
N;Alternate names: Oncoprotein p53
C;Species: Mus musculus (house mouse)
C;Date: 28-Aug-1985 #sequence revision 04-Oct-1996 #text change 09-C;Date: 28-Aug-1985 #sequence revision 04-Oct-1996 #text change 09-C;Accession: A22739; S06336; AD2684; S38822; S38823; S40014; I48703 R;Bienz, B.; Zakut-Houri, R.; Givol, D.; Oren, M.
EMBO J. 3, 2179-2183, 1984
A;Title: Analysis of the gene coding for the murine cellular tumour A;Reference number: A22739; MUID:85027173; PMID:6092064
A;Accession: A22739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nucleic Acids Res. 20, 1979-1981, 1992
A;Title: Alternatively spliced p53 RNA in transformed and A;Reference number: S35478; MUID:92253421; PMID:1579500
A;Title: A single gene and a pseudogene for A;Reference number: A02684; MUID:84068204; A;Accession: A02684
                                                                                                                                                                                                                                                      Bioorg. Khim. 13, 1691-1694, 1987
A;Title: Primary structure of DNA complementary to murin
A;Reference number: S06336; MUID:88221682; PMID:3329909
A;Accession: S06336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F;319-357/Region: tetramer association
F;77,9,12,18,23,37/Binding site: phosphate (Ser) (covalent) #status predicted
F;77,9,176,235,239/Binding site: zinc (Cys, His, Cys, Cys) #status predicted
F;173,176,235,239/Binding site: zinc (Cys, His, Cys, Cys) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Molecule type: mRNA
A;Residues: 1-381 <HAN>
A;Cross-references: UNIPARC:UPI000016CF91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Keywords: alternative splicing; phosphoprotein; zinc F;1-44/Domain: transcription activation #status predicted
                                                                                                                  A;Cross-references: UNIPARC:UPI00001449CC R;Zakut-Houri, R.; Oren, M.; Bienz, B.; Lavie,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F;313-319/Region: nuclear location signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: nucleic acid sequence not shown; translation not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Superfamily: cellular tumor antigen p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cross-references: UNIPARC:UPI000016CF91; GB:M13874; NID:g200202; PIDN:AAA39883.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    core #status predicted <DBC:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 74;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         by alternative splicing of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16CF91; EMBL:M13874; NID:g200202; PIDN:AAA39883.1; submitted to the EMBL Data Library, July 1988 by alternative splicing of the tenth intron, lacks
                                                                                                               в.
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            c (Cys, His, (covalent)
                                                                                                                                                                                                                                                                                                                                                                                                      UNIPARC: UPI00001449CC; GB: X00876; NID: g871420;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                 translation
                                   for the cellular 04; PMID:6646235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .0019;
                                                                                                               V.; Hazum,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , Cys, Cys
(by cdc2
                                                                                                                                                                                                                                                                                                                    murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 381;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cys) #status
dc2 kinase) #s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     normal cells
                                                                                                                     S.; Givol,
                                                                                                                                                                                                                                                                                                                    oncoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <TRA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               us predicted
#status pre
                                                             antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                    p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of different
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                            PIDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tiss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PID
```

```
N,Alternate names: gene p53 protein; nuclear oncoprotein C,Species: Rattus norvegicus (Norway rat) C,Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_C,Accession: S02192; S41149
C,Accession: S02192; S41149
C,Soussi, T.; de Fromentel, C.C.; Breugnot, C.; May, E. Nucleic Acids Res. 16, 11384, 1988
A;Title: Nucleotide sequence of a cDNA encoding the rat pA;Reference number: S02192; MUID:89083585; PMID:3060862
A;Accession: S02192
A;Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: mRNA
A; Residues: 1-167, 'G', 169-390 < ARA3>
A; Cross-references: UNIPARC: UPI000016CF90; EMBL: M13873;
A; Cross-references: UNIPARC: UPI0000016CF90; EMBL: M13873;
A; Jenkins, J.R.; Rudge, K.; Redmond, S.; Wade-Evans, A.
Nucleic Acids Res. 12, 5609-5626, 1984
A; Title: Cloning and expression analysis of full length
A; Reference number: 148703; MUID: 84272240; PMID: 6379601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA
A; Residues: 1-47, 'R', 49-78, 'QW', 82-390 <RES>
A; Residues: 1-47, 'R', 49-78, 'QW', 82-390 <RES>
A; Cross-references: UNIPARC: UPI000016CF8F; EMBL: X00741; NID: 953570; PIDN: CAA25323.1; PID C; Comment: This DNA-binding protein plays an essential role in the regulation of cell dic; Comment: The tetramer association region may exhibit a beta-turn, beta-sheet, beta-turn C; Superfamily: cellular tumor antigen p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Molecule type: mRNA
A;Residues: 1-167, 'G',169-233, 'I',235-390 <ARA2>
A;Residues: 1-167, 'G',169-233, 'I',235-390 <ARA2>
A;Cross-references: UNIPARC:UPI00001739B9; EMBL.M13873
R;Arai, N.; Nomura, D.; Yokota, K.; Wolf, D.; Brill, E.;
submitted to the EMBL Data Library, July 1988
A;Reference number: S40014
A;Recession: S40014
                                                                                                                                                                                                                                                                                                                                  cellular tumor antigen p53 - rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F;160-192/Region: L2 loop
F;168-178/Region: conserved region III
F;231-252/Region: conserved region IV
F;233-248/Region: L3 loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Title: Immunologically distinct p53 molecules generated by alternative splicing. A;Reference number: S38822; MUID:87064640; PMID:3023970 A;Accession: S38822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Residues: 1-159,'H',161-167,'G',169-233,'I',235-390 <ZAK>
A;Cross-references: UNIPARC:UPI00001739B8; GB:X01237; GB:K01700; NID:g53575;
R;Arai, N., Nomura, D., Yokota, K.; Wolf, D.; Brill, E.; Shohat, O.; Rotter, Mol. Cell. Biol. 6, 3232-3239, 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Accession: S38823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: UNIPARC:UPI00000002B3; EMBL:M13872; NID:g200198; PIDN:AAA39881.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              267-283/Region: conserved region V;313-319/Region: nuclear location signal;319-357/Region: tetramer association
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :108-121/Region: L1 loop
:114-139/Region: conserved region II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99-289/Domain: DNA-binding core #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Keywords: apoptosis; cell division control; DNA binding; 1-44/Domain: transcription activation #status predicted <
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Accession: I48703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Residues: 1-390 <ARAl>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6-26/Region: conserved region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9,12,18,23,37/Binding site: phosphate (Ser) (covalent) #status predicted 73,176,235,239/Binding site: zinc (Cys, His, Cys, Cys) #status predicted 12/Binding site: phosphate (Ser) (covalent) (by cdc2 kinase) #status predicted 9/Binding site: phosphoryl-RNA (Ser) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLSQETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PLSQETFSGLWKLLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                70.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     °,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 74; DB 1;
Pred. No. 0.0019;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                          10-Sep-1999 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <DBC>
                                                                                                p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NID: g200200;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shohat,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          homotetramer; phosphoprotein <TRA>
                                                                                                nuclear oncoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O.; Rotter,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequences encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIDN:AAA39882.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <
```

```
A;Reference number: S28857; MUID:93138096; PMID:8422924
A;Starus: """
                                                                                             glutamate receptor delta-1 chain precursor - rat N;Alternate names: kainate receptor C;Species: Rattus norvegicus (Norway rat) C;Date: 07-Apr-1994 #sequence_revision 07-Apr-1994 #text_change 31-Dec-2004 C;Accession: S28857; S31222 C;Accession: S28857; S31222 R;Lomeli, H.; Sprengel, R.; Laurie, D.J.; Koehr, G.; Herb, A.; Seeburg, P.H R;Domeli, H.; Slengel, R.; Laurie, D.J.; Koehr, G.; Herb, A.; Seeburg, P.H FEBS Lett. 315, 318-322, 1993 R;Title: The rat delta-1 and delta-2 subunits extend the excitatory amino and A;Title: The rat delta-1 and delta-2 subunits extend the excitatory amino and A;Title: The rat delta-1 and delta-2 subunits extend the excitatory amino and A;Title: The rat delta-1 and delta-2 subunits extend the excitatory amino and A;Title: The rat delta-1 and delta-2 subunits extend the excitatory amino and A;Title: The rat delta-1 and delta-2 subunits extend the excitatory amino and A;Title: The rat delta-1 and delta-2 subunits extend the excitatory amino and A;Title: The rat delta-1 and delta-2 subunits extend the excitatory amino and A;Title: The rat delta-1 and delta-2 subunits extend the excitatory amino and A;Title: The rat delta-1 and delta-2 subunits extend the excitatory amino and A;Title: The rat delta-1 and delta-2 subunits extend the excitatory amino and A;Title: The rat delta-1 and delta-2 subunits extend the excitatory amino and A;Title: The rat delta-1 and delta-2 subunits extend the excitatory amino and A;Title: The rat delta-2 subunits extend the excitatory amino and A;Title: The rat delta-2 subunits extend the excitatory amino and A;Title: The rat delta-2 subunits extend the excitatory amino and A;Title: The rat delta-2 subunits extend the excitatory amino and A;Title: The rat delta-2 subunits extend the excitatory amino and a su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Comment: This protein is the product of a tumor suppressor gene, p53, who: C;Superfamily: cellular tumor antigen p53
C;Keywords: apoptosis; cell division control; DNA binding; homotetramer; nuce;164,167,227,231/Binding site: zinc (Cys, His, Cys, Cys) #status predicted F;395/Binding site: phosphoryl-RNA (Ser) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: mRNA
A;Residues: 1-396 <DEF>
A;Residues: 1-396 <DEF>
A;Cross-references: UNIPROT:P25035; UNIPARC:UPI0000131043; GB:M75145; NID:g213828; PIDN
A;Experimental source: liver
A;Experimental source: liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Hulla, J.E.; Schneider, R.P.
Nucleic Acids Res. 21, 713-717, 1993
A;Title: Structure of the rat p53 tumor suppressor gene A;Reference number: S41149; MUID:93181268; PMID:8441680
A;Accession: S41149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;de Fromentel, C.C.; Pa
Gene 112, 241-245, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004 C;Accession: JH0631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cellular tumor antigen p53 - rainbow trout
C; Species: Oncorhynchus mykiss (rainbow trout)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: DNA
A;Residues: 1-173,'W',175-391 <HUL>
A;Cross-references: UNIPARC:UPI00001679E9; EMBL:L07909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Accession: JH0631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Title: Rainbow trout p53: A; Reference number: JH0631;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Introne: 25/2; 32/3; 123/3; 185/1; 259/2; 305/1; 329/3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Note: the nucleotide sequence was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Status: preliminary; nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: UNIPROT:P10361; UNIPARC:UPI0000131048; EMBL:X13058; NID:g56828; PID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Residues: 1-391 <SOU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Superfamily: cellular tumor antigen p53; Reywords: apoptosis; cell division control; DNA binding; homotetramer; nu; Keywords: apoptosis; cell division control; DNA binding; homotetramer; nu; 174,177,236,240/Binding site: zinc (Cys, His, Cys, Cys) #status predicted; 390/Binding site: phosphoryl-RNA (Ser) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 PLSQETFSDLWKL 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLSOETESDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C.C.; Pakdel, F.; Chapus, A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57.1%;
76.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       68.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA cloning and biochemical characterization MUID:92210006; PMID:1339362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 60;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 72; DB 1;
Pred. No. 0.0039;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence not shown; translation not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0.26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baney,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 391;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C.; May, P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Data Library,
                                                                                                                                                                              Seeburg, P.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              p53, whose inactivat
                                                                                                             amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleus; phosp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nucleus; phosp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1992
```

A;Status: nucleic acid sequence

not

Molecule type: mRNA

```
A;Molecule type: mRNA
A;Residues: 1-1009 <YAM>
A;Residues: 1-1009 <AYAM>
A;Residues: 1-1009 <AYAM>
A;Residues: 1-1009 <AYAM>
A;Residues: 1-1009 <AYAM>
A;Residues: 1-1000 <AYAM
A;Residues: 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Molecule type: mRNA
A;Rosidues: 83-1009 <SPR>
A;Residues: 83-1009 <SPR>
A;Residues: 83-1009 <SPR>
A;Residues: 83-1009 <SPR>
A;Residues: B3-1009 <SPR>
A;Residues: B3-1009 <SPR>
A;Residues: B3-1009 <SPR>
A;Cross-references: UNIPARC:UPI0000170981; EMBL:Z17238; NID:g56285; PIDN:CAA78936.1; PII
A;Cross-references: UNIPARC:UPI0000170981; EMBL:Z17238; NID:g56285; PIDN:CAA78936.1; PII
C;Superfamily: mannose 6-phosphate receptor, cation-independent; glutamate receptor channel; neurotransmitter receptor; transmembrane protein
F;16-1009/Product: glutamate receptor delta-1 chain #status predicted <MAT>
F;441-866/Domain: glutamate receptor homology <GRH:
F;441-866/Domain: glutamate receptor homology <GRH:
precorrin-2 methyltransferase homolog - Methanococcus jannaschii C;Species: Methanococcus jannaschii C;Species: Methanococcus jannaschii C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 05-Oct-2004 C;Accession: C64396 R;Bult, C.J.; White, O.; Olsen, G.J.; Zhou, L.; Fleischmann, R.D.; Sutton, G, Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, K.G.; Merrick, J.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   glutamate receptor delta-1 chain precursor - mouse (;Species: Mus musculus (house mouse) (;Date: 30-Jun-192 #sequence_revision 30-Jun-1992 #text_change 31-Dec-2004 C;Accession: JH0266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R;Yamazaki, M.; Araki, K.; Shibata, A.; Mishina, M. Biochem. Biophys. Res. Commun. 183, 886-892, 1992 A;Title: Molecular cloning of a cDNA encoding a novel m. A;Reference number: JH0266; MUID:92198486; PMID:1372507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Reference number:
A;Accession: S31222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Reference number: S31222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: UNIPARC:UPI0000177961; EMBL:Z17238 R;Sprengel, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Reference number: A; Accession: JH0266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                              C64396
                                                                                                                                                                                                                                                                                                         RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Status: nucleic acid sequence not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7:565-584/Domain: transmembrane #status predicted <TM1>
7:601-621/Domain: transmembrane #status predicted <TM2>
7:632-654/Domain: transmembrane #status predicted <TM3>
7:632-654/Domain: transmembrane #status predicted <TM4>
7:422/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;565-584/Domain: transmembrane #status predicted <TR1>;603-621/Domain: transmembrane #status predicted <TR2>;603-650/Domain: transmembrane #status predicted <TR3>;632-650/Domain: transmembrane #status predicted <TR4>;831-851/Domain: transmembrane #status predicted <TR4>;131,200,422,498/Binding site: carbohydrate (Asn) (cov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                  869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 PLSQE-TFSDLWKLLPENG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 PLSQE-TFSDLWKLLPENG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                              PLEODSTFAELWRTISKNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLEQDSTFAELWRTISKNG 716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  site:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  phosphate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Library, October 1992
        G.J.; Zhou, L.; Fleischmann, R.D.; Sutton, G.G.; Blairkness, E.F.; Weinstock, K.G.; Merrick, J.M.; Glodek,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                  716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 51.5;
Pred. No. 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (Ser)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No. 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       member
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1009;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1009;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               glutamate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rece
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Search completed: July Job time : 41 secs
```

ū

2006,

22:46:31

```
Genome Res. 11, 731-753, 2001
A;Title: The complete genome sequence of the lactic acid bacterium Lactococcus
A;Reference number: A86625; MUID:21235186; PMID:11337471
                                                                                                                                                                                                                                                                                                                                                                       C; Species: Lactococc
C; Date: 23-Mar-2001
C; Accession: G86715
                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
G86715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Map position: FOR691742-692434
A;Start codon: GTG
C;Superfamily: precorrin-2 C20-methyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: UNIPROT:Q58181; C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary; nucleic acid
A;Molecule type: DNA
A;Residues: 1-230 <BUL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Science 273, 1058-1073, 1996
A;Authors: Kaine, B.P.; Borodovsky, M.; Klenk, H.P.; Fraser, C.M.; Smith, H.O.; Woese, C.A;Authors: Kaine, B.P.; Borodovsky, M.; Klenk, H.P.; Fraser, C.M.; Smith, H.O.; Woese, C.A;Title: Complete genome sequence of the methanogenic archaeon, Methanococcus jannaschii A;Reference number: A64300; MUID:96337999; PMID:8688087
A;Accession: C64396
                               S
                                                                                                                                                                                                                                                                                                                                                                                       racemase [imported] - Lactococcus lactis subsp. lactis (strain IL1403)
C;Species: Lactococcus lactis subsp. lactis
C;Date: 23-Mar_2001 #sequence_revision 23-Mar-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
밁
                                                                                                                                                                                 A;Cross-references: UNIPROT:Q9CHK4; UNIPARC:UPI00000C68C4; GB:AE005176; PID:g12723640; A;Experimental source: strain IL1403
                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-367 <STO>
                                                                                                                                                                                                                                                                                                                                                  R; Bolotin, A.; Wincker, P.; Mauger, S.; Jaillon,
                                                                                                                                              A;Gene: yhdB
                                                                                                                                                                                                                                                          A; Status: preliminary
                                                                                                                                                                                                                                                                           A; Accession: G86715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rson, J.D.; Sadow, P.W.; Hanna, M.C.; Cotton, M.D.; Roberts, K.M.; Hurst,
                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                        Matches
                                                                                         Best
                                                                                                                                                                    Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15
                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                   PPLSQETFSDLWKLLPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PTLYSTFSYVWKLLKERG 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PLSQETFSDLWKLLPENG 19
PFYTSETFADSWKILEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              : FOR691742-692434
GTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    47.6%;
                                                                                         47.6%;
                                   17
 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1;
                                                                        ω
--
                                                                                         Score 50;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 50; DB Pred. No. 4.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence not shown; translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UNIPARC: UPI0000139CA2; GB:U67522; GB:L77117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                          Mismatches
                                                                                                             DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2;
                                                                                           9
                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                          O.; Malarme,
                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7;
                                                                                                           Length 367;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                          ×.
                                                                          <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                          Weissenbach,
                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           M.A
                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                        lactis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NID:g28
                                                                                                                                                                                                                                                                                                                                                            Ehrl:
                                                                                                                                                                                                                                                                                                                        š
```

```
Result
No.
                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 su
                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM protein - protein search, using sw model
Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                   Score
                                                                                                                                                                                                                                                                                                                                                                                 seq
    length: 0
length: 2000000000
                                                                                                                                                                                                                                                  Query
Match
                                                                                                                                                                                                                                                                                                                  UniProt_7.2:*
1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         July 5, 2006, 22:37:36 ; Search time 295 Seconds (without alignments) 59.577 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                     BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-403-440A-2
105
   2849598 segs, 925015592 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 PPLSQETFSDLWKLLPENG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.9
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                  Length
  386
391
391
391
393
393
393
393
393
393
386
386
387
387
387
387
387
387
387
                                                                                                                                                                                                                                                   DB
                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapext 0.5
P53_FELCA
Q920Y0_MERUN
P53_CRIGR
P53_MESAU
P53_MESAU
Q5XHJJ3_XENLA
Q6NTF1_XENTR
Q7T1D0_XENLA
                                                     PS3_TUPGB
QSUG94 HUMAN
QSUG94 HUMAN
QZXSC7 HUMAN
Q2XSC7 HUMAN
Q68VB0 SPAJD
PS3_BOSIN
PS3_BOSIN
PS3_BOVIN
Q3ZCF1_BOVIN
Q3ZCF1_BOVIN
Q3ZCF1_BOVIN
Q3ZCF1_BOVIN
Q3ZCF1_BOVIN
Q3ZCF1_BOVIN
Q3ZCF1_BOVIN
Q3ZCF1_BOVIN
                                                                                                                                                                                                             Q6IT77_HUMAN
Q3LRW5_HUMAN
Q3LRW4_HUMAN
P53_PIG
                                                                                                                                               P53_CERAE
P53_HUMAN
P53_MACFA
P53_MACFU
P53_MACMU
                                                                                                                                                                                    P53_DELLE
P53_CAVPO
P53_RABIT
                                                                                                                                                                                                                                                                                                                                                    summaries
                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                             19
                                                                                                                                                                                                                                                                                                                                                                                                        2849598
                                                     P51664
P67938
P67939
Q3zcf1
Q9n252
Q9n252
Q36006
  Q920y0
009185
Q00366
Q5xhj3
Q6ntf1
Q7t1d0
                                                                                                                                                                              Q9wur6
Q95330
P13481
                                                                                                                                                                                                            Q6it77
Q3lrw5
Q3lrw4
Q3tub2
                                                                                                                 Q2xn98
Q2xsc7
                                                                                                                                                       P56423
P61260
                                                                                                           Q68vb0
                                                                                                                                Q5u0e4
                                                                                                                                        Q9tta1
                                                                                                                                                                                                                                                 Description
                                                                                                                                                P56424
                                                                                                                                                                       P04637
                                                                                                                                                                                                    Q8spz3
 6 marmota mon
7 canis famil
5 felis silve
6 meriones un
6 cricetulus
6 mesocricetu
3 xenopus lae
1 xenopus lae
0 xenopus lae
                                                                     o macaca fusc

4 macaca mula
1 tupaia glis
4 homo sapien
6 homo sapien
7 homo sapien
8 palax juda
4 ovis aries
8 bos indicus
9 bos taurus
1 bos taurus
2 sus scrofa
                                                                                                                                                                                                   homo sapien
sus scrofa
delphinapte
                                                                                                                                                              cercopithec homo sapien macaca fasc
                                                                                                                                                                                    cavia porce
oryctolagus
```

33	R R R R R R R R R R R R R R R R R R R	о <sub>у</sub>	S 3 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
1 363 1 P53 XENLA 2 OSER40 MOUSE 2 357 2 OSER40 MOUSE 2 357 2 OSER40 MOUSE 2 OSER41 MOUSE 2 OSER	SC US	Query Best Match	ITITI
USE  USE  USE  USE  USE  USE  USE  USE	PRELIMINARY; PRT ntegrated into Unip- equence version 1. ntry version 5. rm.  Crai azoa; Chordata; Crai azoa; Charchontoglii eria; Buarchontoglii 6;  UENCE. 1; DOI=10.1101/gad.: Fernandes K., Murray, Saville M.K., Lan	Match 94.3%; Scoocal Similarity 100.0%; Puss 18; Conservative 0; 1 PPLSQETFSDLWKLLPEN 18 1	7.1 363 1 0.5 307 2 0.5 307 2 0.5 378 2 0.5 378 2 0.5 381 2 0.5 380 2 0.5 390 2 0.5 390 2 0.5 391 2 8.6 271 2 8.6 271 2 8.6 391 1 8.6 391 1 8.6 271 2 8.6 271 2 8.6 271 2 8.6 271 2 8.6 170 2 8.6 170 2 8.6 271 2 8.6 27
ot A.,	341 AA. B/TrEMBL. a; Vertebrata; Eutel Primates; Catarrhir Primates; Catarrhir	; DB 2; Length 39 b. 2.4e-07; cches 0; Indels	AA.  rEMBL.  rembl.  calimates; C
	ostomi; Homin	••	93 xen 93 xen 940 mus 121 mus 127 mus 140 mus 166 mus 168 mus 179 rat 170 rat 170 rat 170 rat 170 rat
		0;	day neo musculu norv tus norv tus norv tus norv

```
RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SO DE RESERVATION DE 
    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genes Dev. 19:2122-; [2]
NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE.

PubMed=16131611; DOI=10.1101/gad.1339905;

Bourdon J.C., Fernandes K., Murray-Zmijewski F., Liu G., D
Xirodimas D.P., Saville M.K., Lane D.P.;

"p53 isoforms can regulate p53 transcriptional activity.";

Genes Dev. 19:2122-2137(2005).
    888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Activator; Anti-oncogene; Apoptosis; Cell cycle; Metal-binding; Nuclear protein; Phosphorylation; Transcription regulation; Zinc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bourdon J.-C.R., Fernandes K., Lane D.; Submitted (AUG-2005) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-OCT-2005, sequence version 07-FEB-2006, entry version 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q3LRW4_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Distributed
                                                                  EMBL;
                                                                                                       Distributed
                                                                                                                                Copyrighted
                                                                                                                                                                        Submitted (AUG-2005) to
                                                                                                                                                                                         NUCLEOTIDE SEQUENCE.
Bourdon J.-C.R., Fer
                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Name≃TP53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P53 gamma isoform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-OCT-2005,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Copyrighted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "p53 isoforms can regulate p53 transcriptional activity.";
Jenes Dev. 19:2122-2137(2005).
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HUMAN
  ; GO:0005634;
; GO:0046872;
; GO:0003700;
                                                                  DQ186649;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ۳,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PPLSQETESDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     by the UniProt Consortium, see http://www.uniprot.org/terms under the Creative Commons Attribution-NoDerivs License
                                                                                                          under the
                                                                                                                                by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   integrated into UniProtKB/TrEMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               F:transcription factor a F:zinc ion binding; IEA. P:apoptosis; IEA. P:cell cycle; IEA.
ABA29754.1; -; mRNA.
C:nucleus; IEA.
F:metal ion binding;
F:transcription facto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P:negative regulation of progression through . . P:regulation of transcription, DNA-dependent; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F:metal ion binding; IEA.
                                                                                                                                                                                           Fernandes K.,
                                                                                                                                UniProt Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini; Homin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      37885 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94.3%;
                                                                                                       Creative Commons
                                                                                                                                                                     the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                           Lane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2C5E71634A57F461 CRC64;
    factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                           D.;
                        IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             346 AA.
                                                                                                       see http://www.uniprot.org/terms
Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2; Lo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               activity;
  activity; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA-binding;
Transcription;
                                                                                                                                                                                                                                                                                                                         Diot
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
RESULT 4
P53 P13
P53 P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0006915; P:apoptosis; IEA.
GO; GO:0007049; P:cell cycle; IEA.
GO; GO:0007049; P:cell cycle; IEA.
GO; GO:00045786; P:negative regulation of progression through . . .
GO; GO:006355; P:regulation of transcription, DNA-dependent; IEA.
GO; GO:0006350; P:transcription; IEA.
InterPro; IPR002117; P53.
InterPro; IPR002117; P53_DNA_bd.
Pfam; PF00870; P53; DNA_bd.
PRINTS; PR00386; P53; DNA_bd.
PRONTE; PR00386; P53; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            07-FEB-2006, entry version Cellular tumor antigen p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Activator; Anti-oncogene; Apoptosis; Cell cycle; DNA-binding; Metal-binding; Nuclear protein; Phosphorylation; Transcription; Transcription; Zinc. SEQUENCE 346 AA; 38501 MW; 6F18E09F8CD9129F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=99422034; PubMed=10490836; DOI=10.1038/sj.onc.1202870; Burr P.D., Argyle D.J., Reid S.W.J., Nasir L.; "Nucleotide sequence of the porcine p53 cDNA, and the detection of the p54 cDNA, and and the detection of the p54 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -i- FUNCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Nucleotide sequence of the porcine p53 cDNA, and the detection recombinant porcine p53 expressed in vitro with a variety of ant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sus scrota
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Name=TP53; Synonyms=P53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAY-2000,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antibodies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE SEQUENCE [MRNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia;
                                                                                                                                                                                                                                                                                                                                              expression.

COPACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: Binds DNA as a homotetramer. Found in a complex with

CABLES1 and p53/TP73. Interacts with histone acetyltransferases

EP300 and methyltransferases HRWT1L2 and CARM1, and recruits them

to promoters. C-terminus interacts with TAF1, when TAF1 is part of

the TFIID complex. Interacts with HIPK1, HIPK2, AXIN1, and

P53DINP1. Part of a complex consistiting of TP53, HIPK2 and AXIN1.

Interacts with WMOX (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic and nuclear (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic and nuclear (By similarity).
                                                                                                  SUBCELLULAR LOCATION: Cytoplasmic and nuclear (By similarity). PTM: Phosphorylated. Phosphorylation on Ser residues mediates transcriptional activation. Phosphorylated on Thr-18 by VRK1, which may prevent the interaction with MDM2. Phosphorylated by HIPKI (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUNCTION: Acts as a tumor suppressor in many tumor types; induces growth arrest or apoptosis depending on the physiological circumstances and cell type. Involved in cell cycle regulation as a trans-activator that acts to negatively regulate cell division
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   by controlling a set of genes required for this process. One of the activated genes is an inhibitor of cyclin-dependent kinases. Apoptosis induction seems to be mediated either by stimulation of the control of the co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BAX and FAS antigen expression, or by repression of
     induce proapoptotic program
similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18:5005-5009(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Pig)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           integrated into UniProtKB/Swiss-Prot.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94.3%; ~~
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Laurasiatheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Tumor suppressor p53)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 99; pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi;
                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cetartiodactyla; Suina; Suidae;
                                                                            modulate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.5e-06;
                                                                 RT1 impairs its ability to cell senescence (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 346;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bc1-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      anti-p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
밁
                           Ś
                                                                                                                                  Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMR; (9570B2; 86-282.

GO; GO:0005739; C:mitochondrion; ISS.
GO; GO:0005739; C:mitochondrion; ISS.
GO; GO:0005739; C:mitochondrion; ISS.
GO; GO:0005524; F:ATP binding; ISS.
GO; GO:0005507; F:COpper ion binding; ISS.
GO; GO:0005507; F:CNA binding; ISS.
GO; GO:0005515; F:protein binding; ISS.
GO; GO:0006215; P:apoptosis; ISS.
GO; GO:0006215; P:apoptosis; ISS.
GO; GO:0006215; P:apoptosis; ISS.
GO; GO:0006215; P:caspase activation via
GO; GO:0006215; P:cell aging; ISS.
GO; GO:0007559; P:cell aging; ISS.
GO; GO:00030154; P:cell aging; ISS.
GO; GO:0001759; P:cell aging; ISS.
GO; GO:0001759; P:cell aging; ISS.
GO; GO:0006283; P:cell proliferation; ISS.
GO; GO:0006283; P:cell proliferation;
                                                                                                                               MOD_RES
MOD_RES
MOD_RES
SEQUENCE
                                                                                                                                                                                                            MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                   DNA_BIND
REGION
REGION
REGION
REGION
REGION
REGION
REGION
REGION
                                                                                                                                                                                                                                                                                                 MOTIF
METAL
METAL
METAL
                                                                                                                                                                                                                                                                                                                                                                                     MOTIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Acetylation; Activator; Anti-oncogene; Apoptosis; Cell cycle; DNA-binding; Metal-binding; Nuclear protein; Phosphorylation; Transcription regulation; Zinc.

CHAIN

Cellular tumor antigen p53.
                                                                                                                                                                                                                                                                  BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Distributed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Copyrighted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 many types of cancer.
SIMILARITY: Belongs to the p53 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISEASE: p53 is fou
transformed cells.
12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P04637;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AF098067;
                                                              18; Conserv
                             PPLSQETFSDLWKLLPEN 18
                                                                                                                                 386
                                                              94.3%;
llarity 100.0%;
Conservative
                                                                                                                                                                                298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   under the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                    94
63
92
108
312
318
318
361
                                                                                                                               ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the UniProt Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P:cell proliferation; ISS.
P:negative regulation of cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P:apoptosis; ISS.
P:base-excision repair; ISS.
P:caspase activation via cytochrome
P:caspase activation via cytochrome
P:cell aging; ISS.
P:cell cycle arrest; ISS.
P:cell differentiation; ISS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF04620.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P:nucleotide-excision repair;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F:DNA strand annealing F:protein binding; ISS.
                                                                                                                                                                                                                                                                                  343
168
171
231
235
                                                                                                                                                                                                                                                                                                                                                                                                     285
102
363
285
353
349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  found in increased amounts in a wide variety of ls. p53 is frequently mutated or inactivated in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Creative Commons
                                                                                                                               MW;
                                                                                                                                                                                                                                           Zinc (By similarity).
S'-phospho-RNA (covalent) (similarity).
29
                                                              <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -; mRNA.
                                                                                                                                                                                                                                                                                                                                                 Bipartite no similarity)
Nuclear expo
                                                                              Score 99;
Pred. No
                                                                                                                                             N6-acetyllysine
N6-acetyllysine
N6-acetyllysine
                                                                                                                                                                                              Phosphoserine (by Phosphothreonine similarity).
                                                                                                                                                                                                                                                                                                                                                                                                 Basic (repression
                                                                                                                                                                                                                                                                                                                                                                                                                                 Interaction with WWOX
Interaction with HIPK1
Interaction with AXIN1
Interaction with HIPK2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /FTId=PRO_0000185710
By similarity
                                                                                                                                                                                                                                                                                                                                                                                                                     Oligomerization.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Transcription activation (acidic)
                                                                                                                        6-acetyllysine (By similarity)
6-acetyllysine (By similarity)
6-acetyllysine (By similarity)
A4C3D88E8DF55162 CRC64;
                                                                              ŏ.
                                                                                                                                                                                                                                                                                                                                                  export signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                see http://www.uniprot.org/terms
Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                    nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             activity;
                                                                              DB 1; L
2.8e-06;
                                                                                                                                                                                                                               (by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           growth;
                                                                                                                                                                                                               γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WWOX (By similarity)
                                                                                                                                                                                                                                                                                                                                                                              of DNA-binding).
localization signal
                                                                                            Length 386;
                                                                                                                                                                                                                               PRPK) (By
                                                                                                                                                                                                               VRK1)
                                                                                                                                                                                                                                                                                                                                                  ÝΒ)
                                                                                                                                                                                                                                                                                                                                                                                                                                 (By
(By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ç
                                                                                                                                                                                                                                                                (Ву
                                                                                                                                                                                                                                                                                                                                                  similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                   / similarity)
/ similarity)
/ similarity)
                                                                                                                                                                                                               (By
                                                                                                                                                                                                                               similarity).
                                                             0,
                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                (Ву
                                                             0
```

```
P53_DELLE STANDARD; P
Q88P23;
20-DEC-2005, integrated into Un
01-JUN-2002, sequence version 1
07-FEB-2006, entry version 22.
Cellular tumor antigen p53 (Tum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DELLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Leukocyte; PubMed=12034505; DOI=10.1016/S0378-1119(02)00472-9; MEDLLNE=22030464; PubMed=12034505; DOI=10.1016/S0378-1119(02)00472-9; Xu.N., Shiraki T., Yamada T., Nakajima M., Gauthier J.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                 Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                           Copyrighted
30; GO:0005739; C:mitochondrion; ISS.
30; GO:0005730; C:nucleolus; ISS.
30; GO:0005524; F:ATP binding; ISS.
30; GO:0005507; F:copper ion binding; ISS.
30; GO:0005507; F:DNA binding; ISS.
30; GO:0003677; F:DNA binding; ISS.
30; GO:0005515; F:protein binding; ISS.
30; GO:0005515; F:protein binding; ISS.
30; GO:0006915; P:apoptosis; ISS.
30; GO:0006804; P:base-excision repair; ISS.
30; GO:0006805; P:caspase activation via cytochrome
30; GO:0007569; P:cell aging; ISS.
30; GO:0007050; P:cell cycle arrest; ISS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE SEQUENCE [MRNA].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9749;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Odontoceti; Monodontidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Cetacea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Delphinapterus leucas (Beluga whale)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Name=TP53; Synonyms=P53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Nucleotide sequence of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (eucas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         expression.

COFACTOR: Binds 1 zinc ion per subunit (By Binds 1 zinc ion per subunit ion zomplex with SUBUNIT: Binds DNA as a homoceteramer. Found in a complex interacts with Mari, and recruits the to promoters. C-terminus interacts with Mari, when TAF1 is part the TFIID complex. Interacts with HIPK1, HIPK2, AXIN1, and PS3DINP1. Part of a complex consisting of TPS3, HIPK2 and AXIN Interacts with WWOX (By Similarity).

Interacts with WWOX (By Similarity).

The promoter of a complex consisting of TPS3, HIPK2 and AXIN PS3DINP1. Part of a complex consisting of TPS3, HIPK2 and AXIN PS3DINP1. Part of a complex consisting of TPS3, HIPK2 and AXIN PS3DINP1. Part of a complex consisting of TPS3, HIPK2 and AXIN PS3DINP1. Part of a complex consisting of TPS3, HIPK2 and AXIN PS3DINP1. PAT OF A COMPLEX CONSISTING OF TPS3, HIPK2 and AXIN PS3DINP1. PAT OF TPS3, HIPK2 and AXIN PS3DINP1. PAT OF TPS3, HIPK2 and AXIN PS3DINP1. PAT OF TPS3, HIPK2 and AXIN PS3DINP1. PS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUNCTION: Acts as a tumor suppressor in many tumor types; induces growth arrest or apoptosis depending on the physiological circumstances and cell type. Involved in cell cycle regulation as a trans-activator that acts to negatively regulate cell division by controlling a set of genes required for this process. One of the activated genes is an inhibitor of cyclin-dependent kinases. Apoptosis induction seems to be mediated either by stimulation of BAX and FAS antigen expression, or by repression of Bcl-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 similarity).

DISBASE: p53 is found in increased amounts in transformed cells. p53 is frequently mutated c many types of cancer.

SIMILARITY: Belongs to the p53 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUBCELIULAR LOCATION: Cytoplasmic and nuclear (By similarity)
PTM: Phosphorylated. Phosphorylation on Ser residues mediates
transcriptional activation. Phosphorylated on Thr-18 by VRKI,
which may prevent the interaction with MDM2. Phosphorylated b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            induce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PTM: Acetylated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HIPK1 (By similarity)
                                                                                                                                                                                                                                                                                                              ; AF475081; AAL83290.1;
; Q9NP68; 1AIE.
Q8SPZ3; 87-283.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   288:159-166(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       proapoptotic
                                                                                                                                                                                                                                                                                                                                                                                                                                           by the UniProt Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Its deacetylation by tic program and modula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Delphinapterus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Tumor
                                                                                                                                                                                                                                                                                                                                                              .!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   p53 cDNA of beluga whale (Delphinapterus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UniProtKB/Swiss-Prot
                                                                                                                                                                                                                                                                                                                                                                mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         modulate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       387
                                                     cytochrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIRT1 impairs its ability ate cell senescence (By
                                                                                                                                                                                                                                                                                                                                                                                                                                           http://www.uniprot.org/terms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or inactivated
                                                        ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of.
```

```
RACOCCOC OCC
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GO; GO:0030154; P:cell differentia
GO; GO:0008283; P:cell proliferatio
GO; GO:00030308; P:negative regulat
GO; GO:0006289; P:nucleotide-excis
InterPro; IPR002117; P53
InterPro; IPR011615; P53 RNN bd.
InterPro; IPR012346; P53 RNNT_DNA
InterPro; IPR012346; P53 RNNT_DNA
                                                                                                                                                                                _CAVPO
                                                                                                                                                                                                                                                                                                                 MOD_RES
MOD_RES
                                                                                                                                                                                                                                                                                                                                                       MOD_RES
                                                                                                                                               Q9WUR6;
01-DEC-2000,
                                                                                                                                                                                                                                                                                                                                                                                                           METAL
METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGION
REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00870; P53; 1.
Pfam; PF07710; P53 tetramer; 1.
PRINTS; PR00386; P53SUPPRESSR.
ProDom; PD002681; P53; 1.
PROSITE; P800348; P53; 1.
TISSUE=Spleen;
MEDLINE=99265972; PubMed=10331945; DOI=10.1006/geno.1999.5794;
n'erchia A.M., Pesole G., Tullo A., Saccone C., Sbisa E.;
                                                                                                                         01-NOV-1999, sequence version 07-FEB-2006, entry version 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGION
REGION
                                                                Mammalia; Eutheria; Euarchontoglires;
Hystricognathi; Caviidae; Cavia.
                                                                                  Cavia porcellus (Guinea pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
                                                                                                                  Cellular tumor antigen p53
                                                                                                                                                                     P53_
                                                                                                                                                                                                                                                                                                        SEQUENCE
                                    NUCLEOTIDE SEQUENCE [MRNA]
                                                                                                           Name=TP53;
                                                                                                                                                                                                                                                                                                                                                                                        BINDING
                                                                                                                                                                                                                                                                                                                                                                                                   METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                           MOTIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOTIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA_BIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Transcription;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Acetylation; Activator; Anti-oncogene; Apoptosis; Cell cycle; DNA-binding; Metal-binding; Nuclear protein; Phosphorylation;
                                                      NCBI_TaxID=10141;
                                                                                                                                                                                          σ
                                                                                                                                                                      CAVPO
                                                                                                                                                                                                                         12
                                                                                                                                                                                                                                           ۲
                                                                                                                                                                                                                                                                18;
                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                         PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                   PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IPR010991;
                                                                                                                                                                                                                                                                                                        387
                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                           333
169
172
232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59
109
313
319
362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95
                                                                                                                                                  integrated into UniProtKB/Swiss-Prot.
                                                                                                                                                                                                                                                                                                        AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Transcription
1 387
                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P:cell proliferation; ISS.
P:negative regulation of cell growth; ISS
P:nucleotide-excision repair; ISS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P:cell differentiation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       286
45
                                                                                                                                                                                                                                                                                                                            299
367
                                                                                                                                                                                                                                                                                                                                                                                         386
                                                                                                                                                                                                                                                                                                                                                                                                 344
169
172
232
236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  103
364
286
354
350
381
                                                                                                                                                                                                                                                                                                                                                           18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              p53_tetrameristn.
                                                                                                                                                                                                                                                                                    94.3%;
                                                                                                                                                                                                                                                                                                        MW;
                                                                                                                    (Tumor
                                                                                                                                                                                                                                           18
                                                                                                                                                                                                                         29
                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                        Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          regulation; Zinc.
Cellular tumor antigen
/FTId=PRO_000185699.
                                                                                                                                                                                                                                                                                                                 N6-acetyllysine (By similarity). N6-acetyllysine (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                Zinc (By similarity).
5'-phospho-RNA (covalent) (By
                                                                                                                                                                                                                                                                                                                                                                                                           Zinc
Zinc
                                                                                                                                                                                                                                                                                                                                               similarity)
                                                                                                                                                                                                                                                                                                                                                                               similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bipartite nuclear localization signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oligomerization (By similarity).
Basic (repression of DNA-binding) (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Interaction with HIPK1 (By similarity). Interaction with AXIN1 (By similarity). Interaction with HIPK2 (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 By similarity.
                                                                                                                                                                                                                                                                                                                                      N6-acetyllysine
                                                                                                                                                                                                                                                                                                                                                           Phosphothreonine (by
                                                                                                                                                                                                                                                                                                                                                                   Phosphoserine (by
                                                                                                                                                                                                                                                                                                                                                                                                                                          Nuclear export signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Interaction with WWOX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Transcription activation (acidic)
                                                                                                                                       .
                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA bd
                                                                                                                                                                                                                                                                                                        E4C8BEDBF34A540E
                                                                                                                                                                                                                                                               Mismatches
                                                                                                                  suppressor p53).
                                                                                                                                                                                                                                                                                                                                                                                                                      (By
                                                                                                                                                                      391
                                                                                                                                                                                                                                                            DB 1; Lc..
5. 2.8e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                      similarity)
similarity)
                                                                            Glires;
                                                                                                                                                                                                                                                                                                                                                                                                            similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ISS.
                                                                                                                                                                      A
                                                                                                                                                                                                                                                                                                                                     (By similarity)
                                                                             Rodentia;
                                                                                                                                                                                                                                                                                   Length 387;
                                                                                                                                                                                                                                                                                                                                                                   PRPK)
                                                                                                                                                                                                                                                                                                        CRC64;
                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                           VRK1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                          (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      p53.
                                                                                     Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                         (By similarity).
K1) (By
                                                                                                                                                                                                                                                                                                                                                                                                                                          similarity)
                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ву
                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (By
                                                                                                                                                                                                                                                                0
        8888888888888888888
                                                                                                                                                                                                                                                                                                                            HSSP;
SMR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <del>-</del> <del>-</del> <del>-</del> <del>-</del>
                                                                                    Pfam; PF00870; P53; 1.
Pfam; PF07710; P53 tetramer; 1.
PRINTS; PR00386; P53SUPPRESSR.
                                                                                                                                                        GO; GO:0005739; C:mit-ochondrion; ISS.
GO; GO:0005730; C:nucleolus; ISS.
GO; GO:0005524; F:AIP binding; ISS.
GO; GO:0005527; F:Copper ion binding; ISS.
GO; GO:0005507; F:DNA binding; ISS.
GO; GO:0003677; F:DNA binding; ISS.
GO; GO:0005515; F:protein binding; ISS.
GO; GO:0005515; F:protein binding; ISS.
GO; GO:0006815; P:apoptosis; ISS.
GO; GO:0006825; P:caspase activation repair; ISS.
GO; GO:0006835; P:caspase activation via cyt
GO; GO:0008635; P:cell aging; ISS.
GO; GO:0007569; P:cell cycle arrest; ISS.
GO; GO:0007050; P:cell cycle arrest; ISS.
GO; GO:00030154; P:cell proliferation; ISS.
GO; GO:0008283; P:negative regulation of cel
GO; GO:0006289; P:nucleotide-excision repair
                                                                                                                                                                                                                                                                                                                                                                                                                                 +
      DNA_BIND
                         Acetylation; Activator; Anti-oncogene; Apoptosis; Cell cycle; DNA-binding; Metal-binding; Nuclear protein; Phosphorylation; Transcription regulation; Zinc.
CHAIN 1 391 Cellular tumor antigen p53.
                                                                 ProDom; PD002681; P53; 1.
PROSITE; PS00348; P53; 1.
                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                                                                               Copyrighted
                                                                                                                                        InterPro;
                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                              Q9WUR6;
                                                                                                                                                                                                                                                                                                                                     P04637;
                                                                                                                                                                                                                                                                                                                                                 AJ009673; CAB43196.1;
                                                                                                                IPR002117; P53.
IPR011615; P53 DNA bd.
IPR012346; P53 RUNT DNA bd.
IPR010991; p53 tetrameristn.
        100
                                                                                                                                                                                                                                                                                                                            94-288
                                                                                                                                                                                                                                                                                                                                        1GZH
                                                                                                                                                                                                                                                      F: DNA strand annealing activity; F: protein binding; ISS.
                                                                                                                                                             P:nucleotide-excision repair;
        290
```

-; mRNA.

/FTId=PRO\_0000185696 By similarity.

; ISS. n of cell

iss.

SSI

ISS.

via cytochrome

c; ISS

ISS.

```
"Guinea pig p53 mRNA: identification of new elements in coding and untranslated regions and their functional and evolutionary implications.";
Genomics 58:50-64(1999).
Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                             many types of cancer.
-!- SIMILARITY: Belongs to the p53 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION: Acts as a tumor suppressor in many tumor types; induces growth arrest or apoptosis depending on the physiological circumstances and cell type. Involved in cell cycle regulation as a trans-activator that acts to negatively regulate cell division by controlling a set of genes required for this process. One of the activated genes is an inhibitor of cyclin-dependent kinases. Apoptosis induction seems to be mediated either by stimulation of BAX and FAS antigen expression, or by repression of BC1-2
                                                                                                                                                                                                                                                                                                                                                                                                                           EP300 and methyltransferases HRMT112 and CARM1, and recruits to promoters. C-terminus interacts with TaF1, when TaF1 is par the TFIID complex. Interacts with HIFK1, HIFK2, AXIN1, and P53DINP1. Part of a complex consisiting of TP53, HIFK2 and AXI Interacts with WWOX (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic and nuclear (By similarity). SUBCELLULAR LOCATION: Cytoplasmic and nuclear (By similarity). First Phosphorylated. Phosphorylation on Ser residues mediates transcriptional activation. Phosphorylated on Thr-18 by VRK1, which may prevent the interaction with MDM2. Phosphorylated by HIFK1. Phosphorylated on Ser-46 by HIFK2 upon UV irradiation. Phosphorylation on Ser-46 is required for acetylation by CREBH Phosphorylation on Ser-46 is required for acetylation by CREBH
                                                                                                                                                                                            similarity).
DISEASE: p53 is found in increased transformed cells. p53 is frequently
                                                                                                                                                                                                                                                                                                              PTM: Acetylated. Its deacetylation by SIRT1 impairs its ability induce proapoptotic program and modulate cell senescence (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   expression.

COFACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: Binds DNA as a homotetramer. Found in a complex with

SUBUNIT: Binds DNA as a homotetramer. Found in a complex with

CABLES1 and p53/TP73. Interacts with histone acetyltransferases
                                     by the UniProt Consortium,
                                                                                                                                                                                            increased amounts frequently mutate
                                     see http://www.uniprot.org/terms
                                                                                                                                                                                                 mounts in mutated o
                                                                                                                                                                                                     n
or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and recruits them
                                                                                                                                                                                                     wide variety inactivated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and AXIN1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        is part of
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CREBBP
                                                                                                                                                                                                 in of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           уd
                                                                                                                                                                                                                                                                                                                                                                    ç
```

```
RESULT
P53_RAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                     3_RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOD_RES
MOD_RES
MOD_RES
MOD_RES
SEQUENCE
P53_RABIT STANDARD; PR: Q95330; O1-NOV-1997, integrated into Unil O1-FEB-1997, sequence version 1. 07-FEB-2006, entry version 53. Cellular tumor antigen p53 (Tumo)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOD_RES
                                                                                                                                                                                                   Gene 185:169-173(1997).
                                                                                                                                                                                                                                     MEDLINE=97208869; PubMed=9055811; DOI=10.1016/S0378-1119(96)00604-X; le Goas F., May P., Ronco P., Caron de Fromentel C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOTIF
METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGION
REGION
REGION
REGION
REGION
REGION
                                                                                                                                                                                                                         "cDNA cloning and immunological
                                                                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE (MRNA).
STRAIN=New Zealand;
                                                                                                                                                                                                                                                                                                         Oryctolagus
                                                                                                                                                                                                                                                                                                                    Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                Eukaryota:
                                                                                                                                                                                                                                                                                                                                            Oryctolagus
                                                                                                                                                                                                                                                                                                                                                          Name=TP53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             380
391
                                                                                                                                                                                                                                                                                                                                 cuniculus (Rabbit).
Metazoa; Chordata; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94.3%;
llarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                      integrated into UniProtKB/Swiss-Prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46
303
371
380
43288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      108
368
290
290
358
354
319
                                                                                                                                                                                                                                                                                                                    Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Glires; Lagomorpha; Leporidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ¥
¥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Interaction with HIPKI (
Interaction with AXINI ()
Interaction with AXINI ()
Interaction with HIPK2 (B)
Oligomerization
Basic (repressible)
                                                                                                                                                                                                                                                                                                                                                                    (Tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Phosphothreonine (by VRKI) (By similarity).
Phosphoserine (by HIPK2) (By simil N6-acetyllysine (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 99; DB; Pred. No. 2.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zinc (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bipartite nucle similarity).
Nuclear export
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Phosphoserine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Transcription activation (acidic).
                                                                                                                                                                                                                           characterization
                                                                                                                                                                            opressor in many tumor types; spending on the physiological involved in cell cycle regul
                                                                                                                                                                                                                                                                                                                                                                  suppressor
                                                                                                                                                                                                                                                                                                                                                                                                                             391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.8e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ξģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of DNA-binding).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 391;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRPK) (By
                                                                                                                                                                                                                          е
С
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ( (By similarity).
(1 (By similarity).
(1 (By similarity).
(2 (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (By
                                                                                                                                                                                                                         rabbit p53.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                part of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Ву
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

뭉 S

```
EMBL; X90592; CAA62216.1; -
PIR; JC6193; JC6193.
HSSP; P04637; IGZH.
SMR; Q95330; 91-286.
GO; GO:0005739; C:mucleolus
GO; GO:0005739; F:ATP bindi
GO; GO:0005507; F:Copper io
GO; GO:0003677; F:DNA bindi
GO; GO:0003677; F:DNA bindi
GO; GO:0003677; F:DNA bindi
GO; GO:0003675; F:DNA bindi
GO; GO:0003675; F:DNA bindi
GO; GO:0006915; F:Drotein b
GO; GO:0006915; F:Dapoptosis
GO; GO:0006915; P:caspase
GO; GO:0007639; P:cell agin
GO; GO:0007569; P:cell agin
GO; GO:0007569; P:cell prol
GO; GO:0008283; P:cell prol
GO; GO:0008283; P:cell prol
GO; GO:0008289; P:mucleotive
GO; GO:0008289; P:mucleotive
MOD_RES
MOD_RES
MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                             DNA BIND
REGION
REGION
REGION
                                                                                                                                            METAL
METAL
                                                                                                                                                                      MOTIF
                                                                                                                                                                                                             REGION
REGION
                                                                                                                                                                                                                                    REGION
REGION
                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00870; P53; 1.
Pfam; PF07710; P53; tetramer; 1.
PRINTS; PR00386; P53sUPPRESSR.
ProDom; PD002681; P53; 1.
PROSITE; PS00348; P53; 1.
                                                             MOD_RES
                                                                                                                     METAL
                                                                                                      BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR002117; P53.
InterPro; IPR011615; P53 DNA bd.
InterPro; IPR012346; P53 RUNT DNA bd.
InterPro; IPR010991; p53 tetrameristn.
                                                                                                                                                                                                MOTIF
                                                                                                                                                                                                                                                                                                                                          Franscription;
                                                                                                                                                                                                                                                                                                                                                     Acetylation; Activator; Anti-oncogene; Apoptosis; Cell cycle; DNA-binding; Metal-binding; Nuclear protein; Phosphorylation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Copyrighted by the Distributed under
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30; GO:0005739; C:mitochondrion; ISS.
30; GO:0005730; C:nucleolus; ISS.
30; GO:0005524; F:ATP binding; ISS.
30; GO:0005527; F:copper ion binding; ISS.
30; GO:0005507; F:DNA binding; ISS.
30; GO:000739; F:DNA strand annealing activ.
30; GO:000739; F:DNA strand annealing activ.
30; GO:0005515; F:protein binding; ISS.
30; GO:0005515; P:apoptosis; ISS.
30; GO:000544; P:base-excision repair; ISS.
30; GO:0006284; P:base-excision via cyt.
30; GO:0006285; P:ceapase activation via cyt.
30; GO:0007569; P:cell aging; ISS.
30; GO:0007569; P:cell differentiation; ISS.
30; GO:0007589; P:cell proliferation; ISS.
30; GO:00030154; P:negative regulation of cell
30; GO:0002883; P:negative regulation repair.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   many types of cancer.
SIMILARITY: Belongs to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PTM: Phosphorylated. Phosphorylation on Ser residues transcriptional activation. Phosphorylated on Thr-18 which may prevent the interaction with MDM2. Phospho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISEASE: p53 is found transformed cells. p5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PTM: Acetylated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           which may prevent the interaction HIPK1 (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    induce proapoptotic program
                                                                                                                                                                                                            99
63
97
113
317
323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            by the UniProt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4; P:base-excision repair; ISS.
5; P:caspase activation via cytoch
9; P:cell aging; ISS.
0; P:cell differentiation; ISS.
3; P:cell proliferation; ISS.
8; P:negative regulation of cell g
9; P:nucleotide-excision repair; I
                                                                                                                                                                                                                                                                                                                                         Transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the Creative Commons
                                                                                                      348
173
176
235
239
390
                                                                                                                                                                                                          289
107
368
289
358
354
                                                                                                                                                                                                                                                                                                                              391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Its deacetylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              £3q
  MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -; mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Consortium,
             similarity).
N6-acetyllysine
N6-acetyllysine
N6-acetyllysine
                                                                                                    Zinc (By similarity).
Zinc (By similarity).
5'-phospho-RNA (covalent) (By
                                                                                                                                          Zinc
                                                                                                                                                                                                                                                                                     /FTId=PRO_0000185711.
By similarity.
Transcription activation
                                                                          similarity).
Phosphoserine
                                                                                                                                                                                          Basic (repression Bipartite nuclear
                                                                                                                                                                                                                                                                                                                            regulation; Zinc.
Cellular tumor antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            increased
                                                                 Phosphothreonine
                                                                                                                                                                      Nuclear
                                                                                                                                                                                   similarity)
                                                                                                                                                                                                                        Oligomerization.
                                                                                                                                                                                                                                   Interaction with WWOX
Interaction with HIPK1
Interaction with AXIN1
Interaction with HIPK2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              trequently
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    p53 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
                                                                                                                                          (By similarity)
(By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   modulate cell senescence (By
                                                                                                                                                                   export signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              see http://www.uniprot.org/terms
Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          amounts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mounts in mutated o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cytochrome
                                                                             γď
            (By similarity).
(By similarity).
(By similarity).
                                                                                                                                                                                                                                   h WWOX (By similarity).
h HIPK1 (By similarity)
h AXIN1 (By similarity)
h HIPK2 (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   growth;
                                                                (by VR
                                                                                                                                                                                           of DNA-binding).
localization signal (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      residues mediates
n Thr-18 by VRK1,
Phosphorylated by
                                        similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              or
                                                                  VRK1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ā
                                                                                                                                                                    (Ву
                                                                                                                                                                                                                                                                                                                            p53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inactivated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            wide variety
                                                                             (Ву
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ISS
                                                                                                                                                                                                                                                                                       (acidic)
                                                                                                                                                                      similarity)
                                                                                                                                                                                                                                    similarity)
similarity)
similarity)
                                                                 (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
```

```
엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _CERAE
_P53_C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cercopithecus aethiops (Green monkey) (Grivet).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JAN-1990, sequence version 07-FEB-2006, entry version 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P13481
PIR; S06594; S06594.
HSSP; P04637; 10UG.
SMR; P13481; 94-289.
GO; GO:0005739; C:mitochondrion; ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cercopithecidae; Cercopithecinae; Cercopithecus. NCBI_TaxID=9534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Name=TP53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cellular tumor antigen p53 (Tumor suppressor p53).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JAN-1990,
                                                                 EMBL; X16384; CAA34420.1;
                                                                                                     Distributed under the
                                                                                                                   Copyrighted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Nucleotide sequence of a cDNA encoding the monkey cellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rigaudy P., Eckhardt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=90045967; PubMed=2530498;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           expression.

COFACTOR: Binds 1 zinc ion per subunit (By similarity)

SUBUNIT: Binds DNA as a homotetramer. Found in a compl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PEUCLION: Acids Res. 17:8375-8375(1989).

FUNCTION: Acts as a tumor suppressor in many tumor types; induces growth arrest or apoptosis depending on the physiological circumstances and cell type. Involved in cell cycle regulation as a trans-activator that acts to negatively regulate cell division by controlling a set of genes required for this process. One of the activated genes is an inhibitor of cyclin-dependent kinases. Apoptosis induction seems to be mediated either by stimulation of
                                                                                                                                                 transformed cells. p53 is frequently m many types of cancer.
SIMILARITY: Belongs to the p53 family.
                                                                                                                                                                                                                                                                                                       SUBCELLULAR LOCATION: Cytoplasmic and nuclear (By similarity). PTM: Phosphorylated. Phosphorylation on Ser residues mediates transcriptional activation. Phosphorylated on Thr-18 by VRK1, which may prevent the interaction with MDM2. Phosphorylated on Thr-55 by TAF1 which promotes MDM2-mediated p53 degradation. Phosphorylated by HIPK1 upon Phosphorylated by HIPK1. Phosphorylated on Ser-46 by HIPK2 upon
                                                                                                                                                                                                                                                                                                                                                                                                           CABLES1 and p53/TP73. Interacts with histone acetyltransferases EP300 and methyltransferases HRWT1L2 and CARM1, and recruits them to promoters. C-terminus interacts with TAF1, when TAF1 is part of the TFIID complex. Interacts with HIPK1, HIPK2, AXIN1, and P53DINP1. Part of a complex consisiting of TP53, HIPK2 and AXIN1. Interacts with WMOX (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CERAE
                                                                                                                                                                                                       DISEASE: p53 is found in
                                                                                                                                                                                                                                                         by CREBBP (By sir
PTM: Acetylated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BAX and FAS antigen expression, or by repression of Bcl-2
                                                                                                                                                                                                                                       induce proapoptotic
                                                                                                                                                                                                                                                                                            irradiation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                         CREBBP (By similarity).
M: Acetylated. Its deacetylation by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE [MRNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                       by the UniProt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  integrated into UniProtKB/Swiss-Prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         р53.
                                                                                                                                                                                                                                                                                           Phosphorylation on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94.3%;
100.0%;
                                                                                                     Creative Commons
                                                                                                                                                                                                                                         program
                                                                                                                       Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 99;
Pred. No.
                                                                                                                                                                                                     increased
                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                         modulate cell
                                                                                                                                                                                                                                                                                           Ser-46 is required
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    393
                                                                                                   see http://www.uniprot.org/terms
Attribution-NoDerivs License
                                                                                                                                                                                                          amounts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1; L
2.8e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                       mutated
                                                                                                                                                                                                                                                         SIRT1 impairs its ability
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 391;
                                                                                                                                                                                       in a wide variety
ed or inactivated :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in a complex with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                         senescence
                                                                                                                                                                                                                                                                                           for acetylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                         (Ву
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of
                                                                                                                                                                                                                                                                                                            ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
```

AC AC

P53 HUMAN STANDARD; PRT; 393 AA. P04637; Q15086; Q15087; Q15088; Q16535; Q16807; Q16810; Q16811; Q16848; Q86UG1; Q8JU16; Q99659;

Q16808; Q9BTM4;

```
RESULT 9
P53_HUMAN
                                                                                                                                       멍
                                                                   Ş
                                                                                           Query Match
Best Local S
Matches 18
                                                                                                                                      MOD_RES
MOD_RES
MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA_BIND
REGION
                                                                                                                                                                                                                           MOD_RES
                                                                                                                                                                                                                                                                                               MOTIF
METAL
METAL
                                                                                                                                                                                                                                                                                                                                                                  REGION
REGION
                                                                                                                                                                                                                                                                                                                                                                                                 REGION
REGION
REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00870; P53; 1. — pfam; PF07710; P53 tetramer; 1. PRINTS; PR00386; P53stPFESSR. ProDom; PD002681; P53; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88888888888888888
                                                                                                                                                                                            MOD_RES
                                                                                                                                                                                                                                                                         METAL
                                                                                                                                                                                                                                                                                                                                            MOTIF
                                                                                                                                                                                                                                                                                                                                                     REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                  REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Acetylation; Activator; Anti-oncogene; Apoptosis; Cell cycle; DNA-binding; Metal-binding; Nuclear protein; Phosphorylation; Transcription regulation; Zinc.
CHAIN 1 393 Cellular tumor antigen p53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS00348; P53; 1.
                                                                                                                                                                                                                                                                BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30; GO:0005730; C:nucleolus; ISS.
30; GO:0005507; F:copper ion binding; ISS.
30; GO:0005507; F:DNA binding; ISS.
30; GO:0003677; F:DNA binding; ISS.
30; GO:0003679; F:DNA binding; ISS.
30; GO:0005515; F:protein binding; ISS.
30; GO:0005515; F:protein binding; ISS.
30; GO:0006915; P:apoptosis; ISS.
30; GO:0006834; P:base-excision repair; ISS.
30; GO:0008635; P:caspase activation via cytochr
30; GO:0007050; P:cell aging; ISS.
30; GO:0007050; P:cell differentiation; ISS.
30; GO:00030154; P:cell differentiation; ISS.
30; GO:0008283; P:cell proliferation; ISS.
                                                                                                                                                                                                                                                                                      METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GO:0006289;
                                                 12
                                                             1 PPLSQETFSDLWKLLPEN 18
                                                                                            18;
                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IPR002117; P53.
IPR011615; P53_DNA_bd.
IPR012346; P53_RUNT_DNA_bd.
IPR010991; p53_tetrameristn.
                                                                                                                                        393
                                                                                                                                                    305
373
382
                                                                                             Conservative
                                                                                                                                                                                              55
                                                                                                                                                                                                                                18
                                                                                                                                        AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P:nucleotide-excision repair;
                                                                                                                                                                                              55
50
                                                                                                                                                                                                                                18
                                                                                                      94.3%;
                                                                                                                                         43696
                                                                                                                                           Œ.
                                                  29
                                                                                            0
                                                                                                        Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                      Transcription activation (acidic)
Interaction with WWOX (By similar
Interaction with HIPK1 (By simila
Interaction with AXIN1 (By simila
Interaction with CARM1 (By simila
                                                                                                                                                   N6-acetyllysine N6-acetyllysine
                                                                                                                                                                                                                                                                                             Nuclear export signal Zinc (By similarity). Zinc (By similarity).
                                                                                                                                                                         similarity).
N6-acetyllysine
                                                                                                                                                                                                                               Phosphoserine (by Phosphothreonine
                                                                                                                                                                                                                                                                Zinc (By similarity).
5'-phospho-RNA (covalent) (By
                                                                                                                                                                                                                                                                                                                                            Basic (repression 
Bipartite nuclear
                                                                                                                                                                                                                                                                                                                                                                  Interaction with HIPK2 Oligomerization.
                                                                                                                                                                                               Phosphothreonine
                                                                                                                                                                                                          Phosphoserine
                                                                                                                                                                                                                     similarity)
                                                                                                                                                                                                                                                                                                                                  similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                               Interaction with HRMT1L2 (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                        By similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cellular tumor antigen p53.
/FTId=PRO_0000185697.
                                                                                             Mismatches
                                                                                                                                           9ED285C9A7855D6E
                                                                                                                                                                                                                                                                                      (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        activity;
                                                                                                        DB 1; L
2.9e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cytochrome
                                                                                                                                                                                                          .
(Ъу
                                                                                                                                        (By similarity).
(By similarity).
(By similarity).
(By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              growth;
                                                                                                                                                                                               y HIPK2)
(by TAF1
                                                                                                                                                                                                                               y PRPK) (By I
                                                                                                                                                                                                                                                                                                                                            of DNA-binding).
localization signal (By
                                                                                                                  Length 393;
                                                                                                                                                                                                                                                                                                                                                                          X (By similarity).
K1 (By similarity).
N1 (By similarity).
M1 (By similarity).
K2 (By similarity).
                                                                                              Indels
                                                                                                                                                                                                TAF1)
                                                                                                                                                                                                                                                                                                                       (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ç,
                                                                                                                                                                                                (By similarity)
L) (By
                                                                                                                                                                                                                                similarity).
(By
                                                                                             0,
                                                                                              Gaps
                                                                                              0
```

```
"Isolation and of the human p5 EMBO J. 3:3257-
NUCLEOTIDE SEQUENCE, VARIANT ARG-72, MEDLINE=21264809; PubMed=11058590; D Chang N.-S., Pratt N., Heath J., Sch
                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE, VARIANTS BURKITT'S MEDILINE-92007731; PubMed=1915267; Farrell P.J., Allan G., Shanahan F., Vou"p53 is frequently mutated in Burkitt's EMBO J. 10:2879-2887(1991).
                                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEQUENCE OF 101-393.
MEDLINE=85136934; PubMed=6396087;
MEDLINE=8516934; PubMed=6396087;
MEDLINE=8516934; PubMed=6396087;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUCLEOTIDE SEQUENCE.
MEDLING-89108008; PubMed=2905688; DOI=10.1016/0378-1119(88)90196-5;
Buchman V.L., Chumakov P.M., Ninkina N.N., Samarina O.P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Harlow E., Williamson N.M., Ralston R., Helfman D.M., "Molecular cloning and in vitro expression of a cDNA cellular tumor antigen p53 "; Mol. Cell. Biol. 5:1601-1610(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE SEQUENCE.
MEDLINE=85230577; PubMed=4006916;
Zakut-Houri R., Bienz-Tadmor B.,
                                                                                                     Mirzayans R.;
"Isolation of two cell
                                                                                                                                                      NUCLEOTIDE SEQUENCE, AND VARIANTS ARG-72 MEDLINE=93303270; PubMed=8316628;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Harris N.,
Rotter V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cellular tumor antigen p53 (Antigen NY-CO-13).
Name=TP53; Synonyms=P53;
                                                                                                                                    Allalunis-Turner M.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=87089826; PubMed=3025664;
Harris N., Brill E., Shohat O., F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=85267676; PubMed=3894933;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lamb P., Crawford L.; "Characterization of the human p53 Mol. Cell. Biol. 6:1379-1385(1986)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=87064416;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBO J. 4:1251-1255(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9NP68; Q9NPJ2; Q9NZD0; Q9UBI2; Q9UQ61; 13-AUG-1987, integrated into UniProtKB/Swiss-Prot 01-JUL-1989, sequence version 2. 07-MAR-2006, entry version 101.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lamb P., Crawford
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  variation in the structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                n p53 gene.";
70:245-252(1988).
                                                                                                                                                                                                                                                                                                             human p53 gene.";
. 3:3257-3262(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    p53 cellular tumor antigen:
                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        basis
Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE.
                                                                   f two cell lines from a hisensitivity to radiation 134:349-354(1993).
                                                                                                                                                                                                                                                                                                                               characterization 53 gene.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for heterogeneity of 6:4650-4656(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PubMed=2946935;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini; Homin
                                                                                                                                       Barron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Tumor suppressor
                                                                                                                                    G.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of.
                                                                                                                                                                                                                                                                                                                                              of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Prokocimer M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Givol
                                                                                                                                                                                                                                                                                                                                                                            Peacock J., Crawford
 2, AND INTERACTION
DOI=10.1074/jbc.MC
chultz L., Sleve D.
                                                                                                                                                                                                                                                                                                                                            Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA
                                                                                   human
on and
                                                                                                                                      Day
                                                                                                                                                                                                                                        Vousden
                                                                                                                                                                                                                                                                                                                                              human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein-coding region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
D.,
                                                                                                                                      R.S.
                                                                                                                                                                                                                        lymphoma
                                                                                                                                                                                                                                                                        LYMPHOMA,
                                                                                                                                                                       AND
                                                                                   malignant glioma chemotherapeutic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human
                                                                                                                                                                                                                                                                                                                                            p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oren
                                                                                                                                                                       LYS-286
                                                                                                                                                                                                                                          К.н.,
                                                                                                                                      III,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            p53)
                                                                                                                                                                                                                                                                                                                                              cDNA clone:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wolf D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    e and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    p53
                                                                                                                                                                                                                         ., Crook
                                                                                                                                    Dobler K.D.,
                                                                                                                                                                                                                                                                            AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Phosphoprotein
 .M007140200
D., Carey (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein.
                                 HTIW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    expression
                                                                                                                                                                                                                                                                             VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Adams T.E.;
                                                                                                                                                                                                                                                                                                                                                                            .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Arai N.,
                                                                                                                                                                                                                                           Η.
                                   XOMM
                                                                                   specimen drugs.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  С
Б
                                                                                                                                                                                                                                                                                                                                            expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hominidae;
 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      င္သ
```

RARAR RARAR

```
RA Strausberg R.L., Peingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Stapleton M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Stapleton M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Raha S.S., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Mhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Schnerch A., Schein J.E., Jones S.J.M., Mara M.A.,
Ra Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences ";
 NUCLEOTIDE
Pan X.L., Z
"Study on t
                                                                                                                                             TISSUE-Ling carcinoma;
TISSUE-Ling carcinoma;
PubMed=14660794; DOI=10.1073/pnas.29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Livingston R.J., Rieder M.J., Chung M.-W., Ritchie T.K., Olson A.V., Nguyen C.P., Gildersleeve H., Cassidy C.M., Johnson E.J., Swanson J.E., McFarland I., Yool B., Park C., Nickerson D.A.; "NIEHS-SNPs, environmental genome project, NIEHS ES15478, Department of Genome Sciences, Seattle, WA (URL: http://egp.gs.washington.edu)."; Submitted (NOV-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              M059K has a cancer-associated mutation Radiat. Res. 154:473-476(2000).
                                                                                   bombesin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              restricted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Azuma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Anderson
                                                                                                                                                                                                     NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Azuma K., Shichijo S., Itoh K.; "Identification of a tumor-rejection antigen recognized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUCLEOTIDE SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PubMed=11023613;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUCLEOTIDE SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rozemuller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLEOTIDE
Chumakov P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    enhances tumor
J. Biol. Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zevotek N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Human TP53 from the malignant glioma-derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Hyaluronidase
                                                                                                 carcinoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BOTIDE SEQUENCE.
muller E.H., Tilanus M.G.J.;
genomic sequence. Correctio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C.W.,
 Zhang A.H.;
the effect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (MAR-2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE.

O.M., Almazov V.P.,

(JUN-1991) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (MAR-1997)
                                  SEQUENCE
                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CIL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                     of.
                                                                    Acad.
                                                                                                                                                                                                                                      Acad.
                                                                                                mutant
by anta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    induction of a WW domain-containing
necrosis factor cytotoxicity.";
276:3361-3370(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Allalunis-Turner M.J.;
                                                                                              tant p53 expression and antagonists of growth l
                                  유
                                                                                                                                                                                                     Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [LARGE SCALE
   of tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AND VARIANTS ARG-72; HIS-273 AND SER-309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 e. Corrections and polymorphism.";to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND VARIANTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AND VARIANTS
                                                                  U.S.
                                                                                                                                                                                                1-379,
                                  126-185
                                                                                                                                                                                                                                     U.S.A.
                                                                À
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jenkins J.R.;
EMBL/GenBank/DDBJ
                                                                                                                                                                                                   AND
suppressor
                                                                  100:15836-15841 (2003)
                                                                                                                                                                                                                                     99:16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MRNA),
                                                                                                                                                                  .2536558100
                                                                                                                                                                                                   VARIANTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ARG-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SER-47; ARG-72; LYS-339
                                                                                                                                                  ×
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ij
                                                                                                 1 growth of DMS-15.
                                                                                                                                                  Armatis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AND VARIANTS
 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND LYS-286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                   ARG-72
p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cell lines n 8.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   databases
                                                                                                                                                                                                   AND
   ij.
                                                                                                                   DMS-153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     oxidoreductase
                                                                                                                                                  Bernardino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ARG-72
                                                                                                                                                                                                   ASN-139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T650W
                                                                                                   hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AND ALA-366.
                                                                                                                   small cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AND
                                                                                                                                                 A.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
```

```
RESULT 10
P53_MACFA
  OCCUPATOR
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                              P53_MACFA
P56423;
                                                        15-JUL-1998, integrated into U
10-MAY-2004, sequence version
07-FEB-2006, entry version 50.
Cellular tumor antigen p53 (Tu
Name=TP53; Synonyms=P53;
Macaca fascicularis
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Thompson-Hehir J., Davies M.P.A., Green J.A., Halliwell N., Joyce K.A., Salisbury J., Sibson D.R., Vergote I., Walker C.; "Mutation detection utilizing a novel PCR approach for amplification of the p53 gene from microdissected tissue: application to archival
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Detection of P53 gene mutations with cigarette smoking.";
Submitted (AUG-2003) to the EMBL/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "The human tumour suppressor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=91141509; PubMed=1705009; Samad A., Carroll R.B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pinto E.M., "Allelic var
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Ovarian adenocarcinoma; Filippini G., Soldati G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEAR LOCALIZATION SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               normal cells.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALTERNATIVE SPLICING.
MEDLINE=96197761; PubMed=8632903;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linkage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (MAR-2000) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yavuz A.S.,
Lipsky P.E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEQUENCE OF 225-260.
TISSUE=Glial cell, and Glial tumor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (JUL-1996) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE OF 262-306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Blood;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (SEP-2003) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The tumor suppressor p53 is bound to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   laman J.-M., Waridel F., Estreicher A.,
lbert D., Iggo R., Frebourg T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         samples.";
                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                                                                                                                                    18;
                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                           PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12:813-818(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      variant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ., Mendonca B.B., Latronico A.C.; variant in intron 9 of TP53 gene."; (APR-2003) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P53 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Biol. 11:1598-1606(1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 225-260.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 261-298.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Farner N.L.,
                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                             integrated into UniProtKB/Swiss-Prot
                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mutations
                  (Crab eating macaque)
Chordata; Craniata; V
                                                                                                                                                                                                                                                                                                                                                                                     94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            332-366.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yavuz S.,
                                                                                  (Tumor
                                                                                                                                                                                                                                                                                                                            18
                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                        29
                                                                                                                                                                                                                                                                                                                                                                                     Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in tonsillar B cells.";
                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                suppressor p53).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Grammer A.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                serum p53
                                                                                                                                                                                     393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNA
                                                                                                                                                                                                                                                                                                                                                                                       DB 1; Lo
                     e) (Cynomolgus monkey).Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Vannier A., Limacher J.-M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  alternatively spliced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ជា
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            databases
                                                                                                                                                                                                                                                                                                                                                                                                          Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              stable covalent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antibodies associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Girschick
                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           н.J.,
                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                    0,
      R SNR; PS43; 10JG.

R GO; GO:0005739; C:mitochondrion; ISS.
R GO; GO:0005739; C:mitochondrion; ISS.
R GO; GO:0005739; C:mitochondrion; ISS.
R GO; GO:0005507; F:CORPET ion binding; ISS.
R GO; GO:0005507; F:CORPET ion binding; ISS.
R GO; GO:0000779; F:DNA binding; ISS.
R GO; GO:0000779; F:DNA strand annealing activity;
R GO; GO:0000739; F:DNA strand annealing activity;
R GO; GO:000515; F:protein binding; ISS.
R GO; GO:0006284; P:base-excision repair; ISS.
R GO; GO:0006285; P:cell aging; ISS.
R GO; GO:0007569; P:cell aging; ISS.
R GO; GO:0007569; P:cell differentiation; ISS.
R GO; GO:00008283; P:cell proliferation; ISS.
R GO; GO:00008289; P:nuclectide-excision repair; ISS.
R GO; GO:0006289; P:cell grouper repair; ISS.
R GO; GO:0006289; P:nuclectide-excision repair; ISS.
R GO; GO:0006289; P:cell grouper repair; ISS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Shinizu Y., Ishida T.;

Shinizu Y., Ishida T.;

Shinizu Y., Ishida T.;

Somatic mutations in the p53 gene account for the extension of "Somatic mutations in the pcause cells.",

replicative life span of macaque cells.",

Biochem. Biophys. Res. Commun. 295:644-650(2002).

-i- FUNCTION: Acts as a tumor suppressor in many tumor types; induces growth arrest or apoptosis depending on the physiological circumstances and cell type. Involved in cell cycle regulation as a trans-activator that acts to negatively regulate cell division by controlling a set of genes required for this process. One of the activated genes is an inhibitor of cyclin-dependent kinases. Apoptosis induction seems to be mediated either by stimulation of new antigen expression, or by repression of Bcl-2
                       InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  +++
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEOTIDE SEQUENCE [GENOMIC DNA].

Khan M.A., Hansen C., Welsh J.A., Bennett W.P.
Submitted (FEB-1996) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cercopithecidae; Cercopithecinae; Macaca
NCBI_TaxID=9541;
                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AF456343; AAN64027.1; HSSP; P04637; 10LG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Copyrighted by the UniProt Consortium, Distributed under the Creative Commons
                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U48957; AAB91535.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=22094611;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -!- SIMILARITY: Belongs to the p53 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              expression.

COPACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: Binds DNA as a homotetramer. Found in a complex with SUBUNIT: Binds DNA as a homotetramer. Found in a complex with SUBUNIT: Binds DNA as a homotetramer. Found in a complex with SUBUNIT: Binds DNA as a homotetramer. Found in a cetyltransferases EP300 and methyltransferases HRWFI12 and CARW1, and recruits the DPIOMOTETS. Creminus interacts with TAF1, when TAF1 is part the TFIID complex. Interacts with HIPK1, HIPK2, AXIN1, and P53DINP1. P53DINP1. Part of a complex consisting of TP53, HIPK2 P53DINP1. Interacts with WWOX (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic and nuclear (By similarity).

PTM: Acetylated. Its deacetylation by SIRI impairs its ability in the complex consists of the complex consists.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       by CREBBP (By similarity).
DISEASE: p53 is found in increased amounts in a wide variety transformed cells. p53 is frequently mutated or inactivated:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PTM: Phosphorylated. Phosphorylation on Ser residues mediates transcriptional activation. Phosphorylated on Thr-18 by VRKI, which may prevent the interaction with MDM2. Phosphorylated on Thr-55 by TAF1 which promotes MDM2-mediated p53 degradation. Phosphorylated by HIPKI. Phosphorylated on Ser-46 by HIPK2 upon irradiation. Phosphorylation on Ser-46 is required for acetylati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          many types of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               induce proapoptotic program and modulate cell
                     IPR002117;
IPR011615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE [MRNA].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PubMed=12099687; DOI=10.1016/S0006-291X(02)00730-1;
                                            P53.
  P53_RUNT_DNA_bd
                                                                                                                                                                                                                                                                                                                                                                                                                                   .:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genomic_DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            see http://www.uniprot.org/terms
Attribution-NoDerivs License
                                                                                                                                                                                                                                                                       activity;
                                                                                                                                                                                       cytochrome
                                                                   growth;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     senescence
```

acetylation

Ę

in of

(Ву

ő

HIPK2

them

o f

```
P53
                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local (
                                                                                                                                              p61260;
p61260;
10-MAY-2004, integrated into Un:
10-MAY-2004, sequence version 1:
07-FEB-2006, entry version 25:
Cellular tumor antigen p53 (Tum
Name=TP53; Synonyms=E53;
                                                                                                                                                                                                                         _MACFU
_P53_MACFU
                                                                                                                                                                                                                                                                                                                                                                             MOD_RES
MOD_RES
MOD_RES
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA_BIND
REGION
REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOD_RES
                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebra
Mammalia; Eutheria; Euarchontoglires; Primates;
Cercopithecidae; Cercopithecinae; Macaca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGION
REGION
REGION
REGION
"Somatic mutations in the p53 gene account for the replicative life span of macaque cells."; Biochem. Biophys. Res. Commun. 295:644-650(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    METAL
METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGION
REGION
                                 Shimizu Y., Ishida
                                              MEDLINE=22094611;
                                                        TISSUE=Lung;
                                                                    NUCLEOTIDE SEQUENCE [MRNA].
                                                                                                                                         Macaca fuscata fuscata (Japanese macaque)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOTIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Transcription;
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Acetylation; Activator; Anti-oncogene; Apoptosis; Cell cycle; DNA-binding; Metal-binding; Nuclear protein; Phosphorylation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR00386; P53SUPPRESSR. ProDom; PD002681; P53; 1. PROSITE; PS00348; P53; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR010991; p53_tet;
Pfam; PF00870; P53; 1.
Pfam; PF07710; P53_tetramer;
                                                                                                                                                                                                                                                                                    12
                                                                                                                                                                                                                                                                                                                                18; Conservative
                                                                                                                                                                                                                                                                                                    PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                 PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                               393 AA;
                                                                                                                                                                                                integrated into UniProtKB/Swiss-Prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                   55
55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Transcription
                                                                                                                                                                                                                         STANDARD;
                                             PubMed=12099687;
                                                                                                                                                                                                                                                                                                                                                                                          305
373
382
30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        350
176
179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        292
83
110
110
370
292
292
393
360
387
                                                                                                                                                                                                                                                                                                                                                                                                                                                  5.6
5.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _p53_tetrameristn.
                                                                                                                                                                                                                                                                                                                                                                               ™
                                                                                                                                                               25.
(Tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Phosphothreonine (by E similarity)
                                                                                                                                                                                                                                                                                  29
                                                                                                                                                                                                                                                                                                                                                                                       similarity).
N6-acetyllysine
N6-acetyllysine
N6-acetyllysine
N -> H (in Ref. 1
                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                           Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 regulation; Zinc
Cellular tumor a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Interaction with WWOX (By similarity). Interaction with HIPKI (By similarity). Interaction with AXINI (By similarity). Interaction with CARMI (By similarity). Interaction with HIPK2 (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Phosphothreonine
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Phosphoserine (by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5'-phospho-RNA (covalent)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nuclear export
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bipartite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Basic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oligomerization.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Interaction with HRMT1L2 Transcription activation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           By similarity.
                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FTId=PRO_0000185704
                                                                                                                                                                                                                                                                                                                                                                             E212E5E4FE650103 CRC64;
                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                              suppressor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ar export signal (By similarity).
                                              DOI=10.1016/S0006-291X(02)00730-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (repression
                                                                                                                                                                                                                         393
                                                                                                                                                                                                                                                                                                                           DB 1; ____
J. 2.9e-06;
O;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  similarity)
similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nuclear
                                                                                                                           Vertebrata;
                                                                                                                                                                                                                         ₽
                                                                                                                                                             p53)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antigen
                                                                                                                                                                                                                                                                                                                                                                                                  (By similarity).
(By similarity).
(By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                  γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                  (by TAF1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ξģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of DNA-binding).
localization signal
                                                                                                                                                                                                                                                                                                                                                     Length 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRPK) (By
                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VRK1)
                       extension
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ву
                                                                                                                           Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   / similarity).
(By
                                                                                                                                                                                                                                                                                                                                                                                                                                                            similarity).
                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Ву
                                                                                                                                                                                                                                                                                                                               0
 99999999999999999999999999999999999999
                                                                                                                                                                                                                                                                  EMBL; AP45
SMR; P6124
GO; GO:000
                      DNA_BIND
REGION
REGION
REGION
REGION
REGION
REGION
REGION
MOTIF
                                                                                                                                                                                                                                              InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyrighted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -
                                                                                                                                        Transcription;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          many types of cancer.
SIMILARITY: Belongs to the p53 family.
```

밁 S

```
-
FUNCTION: Acts as a tumor suppressor in many tumor types; induces growth arrest or apoptosis depending on the physiological circumstances and cell type. Involved in cell cycle regulation as a trans-activator that acts to negatively regulate cell division by controlling a set of genes required for this process. One of the activated genes is an inhibitor of cyclin-dependent kinases. Apoptosis induction seems to be mediated either by stimulation of BAX and FAS antigen expression, or by repression of Bcl-2
```

expression.

COPACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: Binds DNA as a homotetramer (By similarity). Found in a complex with CABLES1 and p53/TP73 (By similarity). Interacts with histone acetyltransferases EP300 and methyltransferases HRWT1L2 and CARMI, and recruits them to promoters. Interacts with WWOX Found in a steracts with (Ву

similarity).
SUBCELLULAR LOCATION: Cytoplasmic and nuclear (By similarity).
SUBCELLULAR LOCATION: Cytoplasmic and nuclear (By similarity).
PTM: Phosphorylated on Thr-18 by VRKI, which may prevent the interaction with MDM2 (By similarity).
FTM: Acetylated. Its deacetylation by SIRT1 impairs its ability.
FTM: Acetylated. Its deacetylation by SIRT1 impairs (By DTM).

induce proapoptotic program and modulate cell impairs its ability promotes MDM2-mediated senescence (By ő

PTM: Phosphorylated on Thr-55 by TAF1 which promotes MDM2-med p53 degradation (By similarity).
DISEASE: p53 is found in increased amounts in a wide variety transformed cells. p53 is frequently mutated or inactivated in the promotes of the promotes are promoted by the promoted by the promotes are promoted by the p

Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License AF456344; AAN64028.1; -; by the UniProt Consortium, mRNA. ISS

Pfam; PF00870; P53; 1. — Pfam; PF07710; P53 tetramer; 1. PR10710; P53 tetramer; 1. ProDom; PR002681; P53; 1. PROSITE; PS00348; P53; 1. Acetylation; Activator; Anti-oncogene; Apoptosis; Cell cycle; DNA-binding; Metal-binding; Nuclear protein; Phosphorylation; GO: 0005739 GO: 0005739 GO: 0005507 GO: 0005507 GO: 00003577 GO: 00005515 GO: 0006515 GO: 0006515 GO: 0006515 GO: 0007550 IPRO02117; P53.
IPRO02117; P53 DNA bd.
IPRO11615; P53 TNAT DNA bd.
IPRO12346; P53 TNAT DNA bd.
IPRO10991; P53 tetrameristn. 102 66 300 325 368 4; F.ATP binding; ISS.
7; F.Copper ion binding; ISS.
7; F.DNA binding; ISS.
9; F.DNA strand annealing activity; IS
5; F.EDPOTO binding; ISS.
5; P.EDPOTO binding; ISS.
5; P.EDPOTO binding; ISS.
6; P.Caspase activation via cytochrome
9; P.Call aging; ISS.
0; P.Call aging; ISS.
0; P.Call differentiation; ISS.
4; P.Call differentiation; ISS.
9; P.Call differentiation of cell growth procedures of cell growth pro Transcription regulation, Zinc.
1 393 Cellular tumor antigen
/FTId=PRO 0000185705.
By similarity. C:mitochondrion; C:nucleolus; ISS. 292 83 44 110 393 356 387 321 Interaction with HRMTIL2 (By similarity)
Transcription activation (acidic).
Interaction with WWOX (By similarity)
Interaction with CARMI (By similarity)
Oligomerization. Bipartite nuclear similarity). (repression cytochrome growth; of DNA-binding). localization signal (By ů SSI SSI

```
RESULT 12
P53_MACMU
ID P53_N
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 18
                                                                                                                                    NUCLEOTIDE SEQUENCE [GENOMIC DNA].

NUCLEOTIDE SEQUENCE [GENOMIC DNA].

Khan M.A., Hansen C., Welsh J.A., Bennett W.P.;

Submitted (FEB-1996) to the EMBL/GenBank/DDBJ databases.

-i- FUNCTION: Acts as a tumor suppressor in many tumor types; induces growth arrest or apoptosis depending on the physiological circumstances and cell type. Involved in cell cycle regulation as a trans-activator that acts to negatively regulate cell division by controlling a set of genes required for this process. One of the activated genes is an inhibitor of cyclin-dependent kinases. Apoptosis induction seems to be mediated either by stimulation of BAJA and FAS antigen expression, or by repression of Bcl-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOD_RES
MOD_RES
MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOD_RES
                                                                                                                                                                                                                                                                       MEDLINE=94171042; PubMed=8125305; DOI=10.1016/0378-1119(94)90812-5; Kay H.D., Mountjoy C.P., Wu G., Cornish K.G., Smith L.J.; "Sequence of a cDNA encoding the p53 protein in rhesus monkey (Macaca mulatta).";
                                                                                                                                                                                                                                                                                                                                                                                                      15-JUL-1998, sequence version 07-FEB-2006, entry version 50 Cellular tumor antigen p53 (T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   METAL
METAL
METAL
METAL
                                                                                                                                                                                                                                                                                                                                                              Macaca mulatta (Rhesus macaque).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                    P56424;
15-JUL-1998, integrated into UniProtKB/Swiss-Prot
                                                                                                                                                                                                                                                                                                                                         Cercopithecidae; Cercopithecinae; Macaca.
NCBI_TaxID=9544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PS3_MACMU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BINDING
                                                                                                                                                                                                                                                               Gene 138:223-226(1994).
                                                                                                                                                                                                                                                                                                               TISSUE=Blood
                                                                                                                                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE [MRNA].
                                                                                                                                                                                                                                                                                                                                                                                              Name=TP53; Synonyms=P53;
                                          expression.

COPACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: Binds DNA as a homotetramer: Found in a complex with

CABLES1 and p53/TP73. Interacts with histone acetyltransferases

EP300 and methyltransferases HRMT1L2 and CARM1, and recruits them

to promoters. C-terminus interacts with HIPK1, when TAF1 is part of

the TFIID complex. Interacts with HIPK1, HIPK2, AXIN1, and

P53DINP1. Part of a complex consisting of TP53, HIPK2 and AXIN1.

Interacts with WWOX (By similarity).
                            SUBCELLULAR LOCATION: Cytoplasmic and nuclear (By similarity). PTM: Acetylated. Its deacetylation by SIRT1 impairs its ability to
                 induce proapoptotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
Phosphorylated. Phosphorylation on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 305
373
382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         176
179
238
242
392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15
18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ΑĄ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 305
373
382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                  program
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MW;
                                                                                                                                                                                                                                                                                                                                                                                                       50.
(Tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zinc (By similarity).
Zinc (By similarity).
Zinc (By similarity).
Zinc (By similarity).
5'-phospho-RNA (covalent) (
similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N6-acetyllysine (By : N6-acetyllysine (By : N6-acetyllysine (By : N6-acetyllysine (By : E212E5E4FE650103 CF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Phosphothreonine (by TAF1) (By similarity).
N6-acetyllysine (By similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Phosphothreonine similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Phosphoserine (by PRPK)
                                                                                                                                                                                                                                                                                                                                                                                                                          ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (By similarity).
(By similarity).
(By similarity).
(By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                     suppressor
                   modulate cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                         393 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1; Le 2.9e-06;
 Ser residues mediates
                                                                                                                                                                                                                                                                                                                                                                                                     p53).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                y similarity)
y similarity)
y similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VRK1)
                   senescence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Ву
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                               of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
  EMBL; L20442;
EMBL; U48956;
HSSP; P04637;
                                                                                                                                                                                                                                                                                                                                                                                               DNA BIND
REGION
REGION
REGION
REGION
REGION
REGION
       MOD_RES
                                    MOD_RES
                                                                                         METAL
METAL
                                                                                                                      MOTIF
                                                                                                                                          MOTIF
                                                                                                                                                     REGION
REGION
                                                                                                             METAL
                                                                                                                                                                                                                                                                                 Acetylation; Activator; Anti-oncogene; Apoptosis; Cell cycle; DNA-binding; Metal-binding; Nuclear protein; Phosphorylation;
                                                                                                                                                                                                                                                                                                       PROSITE;
                                                                                                                                                                                                                                                                                                               ProDom; PD002681; P53;
                                                                      BINDING
                                                                                METAL
                                                                                                                                                                                                                                                                        Franscription;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P04637; 10LG
                                                                                                                                                                                                                                                                                                       PS00348; P53; 1.
                                                                                                                                                             102
1 66
100
1116
300
319
                                       18
                                                                                                                                                                                                                                                                         Transcription
                                                                               350
176
179
238
242
                                                                                                                                          292
83
110
110
370
370
393
393
360
356
387
                                                                                                                                                                                                                                                                393
```

Zinc Zinc

Zinc (By simila 5'-phospho-RNA

(By similarity)

(covalent)

(Ву

similarity)

similarity). Phosphoserine

γď

HIPK2) (By similarity)

(by TAF1)

Phosphoserine (by Phosphothreonine

PRPK) (By similarity) (by VRK1) (By

Zinc

Nuclear export signal

(By similarity)

similarity). similarity)

Bipartite r similarity)

Basic

(repression

Of.

nuclear

localization signal (By DNA-binding)

(By similarity).

Oligomerization.

Transcription activation (acidic).
Interaction with WWOX (By similarity).
Interaction with HIPK1 (By similarity).
Interaction with AXIM1 (By similarity).
Interaction with CARM1 (By similarity).
Interaction with HIPK2 (By similarity).

regulation; Zir Cellular tumor

Zinc

Cellular tumor antigen p53/FTId=PRO\_0000185706.

By similarity Interaction wa

with HRMT1L2 (By similarity).
on activation (acidic).

```
InterPro; IPR002117; P53. DNA bd.
InterPro; IPR011615; P53. DNA bd.
InterPro; IPR012346; P53. RUNT DNA bd.
InterPro; IPR010991; p53. tetrameristn.
Pfam; PF00870; P53; 1.
Pfam; PF07710; P53 tetramer; 1.
PRINTS; PR00386; P53SUPPRESSR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMR; P56424; 94-289.

GO; GO:0005739; C:micleolus; ISS.
GO; GO:0005730; C:mucleolus; ISS.
GO; GO:0005524; F:ATP binding; ISS.
GO; GO:0005527; F:DNA binding; ISS.
GO; GO:0005577; F:DNA strand annealing activity;
GO; GO:0000577; F:DNA strand annealing activity;
GO; GO:0000573; F:DNA strand annealing iSS.
GO; GO:0000515; F:protein binding; ISS.
GO; GO:00006284; P:base-excision repair; ISS.
GO; GO:0006284; P:base-excision repair; ISS.
GO; GO:0006759; P:cell aging; ISS.
GO; GO:0007509; P:cell aging; ISS.
GO; GO:0007509; P:cell cycle arrest; ISS.
GO; GO:0008154; P:cell differentiation; ISS.
GO; GO:0008154; P:cell differentiation; ISS.
GO; GO:0008154; P:cell differentiation of cell group; GO:00008284; P:cell cycle arrest; ISS.
GO; GO:0008289; P:nucleotide-excision repair; ISS.
GO; GO:0001089; P:nucleotide-excision repair; ISS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Copyrighted by the UniProt Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             transformed cells. p53 is frequently mutated many types of cancer.
SIMILARITY: Belongs to the p53 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSPILLY MADE TO THE PROSPILLY MADE TO THE PROSPILLY MADE TO THE PROSPILLY OF THE PROSPILL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         transcriptional activation. Phosphorylated on Thr-18 by VRK1, which may prevent the interaction with MDM2. Phosphorylated on Thr-55 by TAF1 which promotes MDM2-mediated p53 degradation. Phosphorylated by HIPK1. Phosphorylated on Ser-46 by HIPK2 upon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA17994.1;
AAB91534.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . .:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genomic_DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cytochrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 http://www.uniprot.org/terms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   I growth;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   acetylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              / of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Wild-type p53 sequence of tree shrews.";
Submitted (AUG-1999) to the EMBI/GenBank/DDBJ databases.
-!- FUNCTION: Acts as a tumor suppressor in many tumor types; induces growth arrest or apoptosis depending on the physiological circumstances and cell type. Involved in cell cycle regulation as a trans-activator that acts to negatively regulate cell division by controlling a set of genes required for this process. One of the activated genes is an inhibitor of cyclin-dependent kinases. Apoptosis induction seems to be mediated either by stimulation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOD_RES
MOD_RES
MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tupaia glis belangeri (Common tree shrew).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Scandentia; Tupaiidae; Tupaia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-DEC-2000, integrated int
01-MAY-2000, sequence versi
07-FEB-2006, entry version
                                                                                                           Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                 transformed cells. p53 is frequently mutated or inactivated many types of cancer.
-i- SIMILARITY: Belongs to the p53 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE SEQUENCE [MRNA].
STRAIN=Chinensis; TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-FEB-2006, entry version 50.
Cellular tumor antigen p53 (Tumor suppressor p53)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Name≖TP53; Synonyms≂P53
                                                                                                                                                                                                                                                                                                                                                                                                     COFACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: Binds DNA as a homotetramer. Interacts with histone subunit: Binds DNA as a homotetramer. Interacts with histone acetyltransferases EP300 and methyltransferases HRWT112 and CARM1, and recruits them to promoters. C-terminus interacts with HIPK1, and psiding of the TFIID complex. Interacts with HIPK1, when TAF1 is part of the TFIID complex consisting of TP53, HIPK2, AXIN1, and P53DINP1. Part of a complex consisting of TP53, HIPK2, AXIN1, Interacts with WWOX (By similarity).

SUBCELLULAR LOCATION: Cytoplasmic and nuclear (By similarity).

PTM: Acetylated. Its deacetylation by SIRT1 impairs its ability to
P; P04637; 1GZH.
; Q9TTA1; 94-289.
GO:0005739; C:mitochondrion;
GO:0005730; C:nucleolus; ISS.
                                                                                                                                                                                                                       transcriptional activation. Phosphorylated on Thr-18 by VRKI, which may prevent the interaction with MDM2. Phosphorylated of Thr-55 by TARI which promotes MDM2-mediated p53 degradation. Phosphorylated by HIPK1 (By similarity). Phosphorylated on Se by HIPK2 upon UV irradiation. Phosphorylation on Ser-46 is required for acetylation by CREBBP (By similarity). DISEASE: p53 is found in increased amounts in a wide variety.
                                                                                                                                                                                                                                                                                                                                                   PTM: Phosphorylated. Phosphorylation on Ser residues
                                                                                                                                                                                                                                                                                                                                                                                        induce proapoptotic program
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              expression
                                                                        AF175893; AAF22640.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and FAS antigen expression, or by repression of Bcl-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             305
373
382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            43655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           into UniProtKB/Swiss-Prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N6-acetyllysine (By
N6-acetyllysine (By
N6-acetyllysine (By
, E212E5E4FE650103 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                          modulate cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.9e-06;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (By similarity).
(By similarity).
(By similarity).
103 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 393;
                                                                                                                                                                                                                                                                                                               residues mediates
n Thr-18 by VRK1,
Phosphorylated on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                          senescence
                                                                                                                                                                                                                                                           on Ser-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
Ş
믕
                                                                             Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                            DNA BIND
REGION
REGION
REGION
REGION
REGION
REGION
REGION
REGION
REGION
                                                                          MOD_RES
MOD_RES
MOD_RES
SEQUENCE
                                                                                                                                                                                      METAL
BINDING
                                                                                                                         MOD_RES
                                                                                                                                                                                                                             MOTIF
METAL
                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00870; P53; 1.
Pfam; PF07710; P53 tetramer; 1.
PRINTS; PR00386; P53sUPPRESSR.
ProDom; PD002681; P53; 1.
PROSITE; PS00348; P53; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
InterPro;
                                                                                                                                                      MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88888888888888888
                                                                                                                                                                                                           METAL
                                                                                                                                                                                                                      METAL
                                                                                                                                                                                                                                                                                                                                                                                         Transcription;
                                                                                                                                                                                                                                                                                                                                                                                                  Acetylation; Activator; Anti-oncogene; Apoptosis; Cell cycle;
DNA-binding; Metal-binding; Nuclear protein; Phosphorylation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GO: 0005524
GO: 0005507
GO: 00003677
GO: 0000739
GO: 00005515
GO: 00065915
GO: 0006284
GO: 00006284
GO: 00006385
GO: 00007569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GO:0030154;
GO:0008283;
GO:0030308;
12 PPLSQETFSDLWKLLPEN
                 1 PPLSQETFSDLWKLLPEN 18
                                      18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0006289;
                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IPR002117; P53. DNA bd.
IPR011615; P53 DNA bd.
IPR012346; P53 RUNT DNA bd.
IPR010991; p53_tetramerIstn.
                                                                                                                            556
                                                                                                                                                          15
18
                                                                             A
A
                                                                                                                                                                                                                                                                                                                                                                                       Transcription regulation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P:cell proliferation; ISS.
P:negative regulation of cell
P:nucleotide-excision repair;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          F:ATP binding; Iss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P:cell aging; ISS.
P:cell cycle arrest; ISS.
P:cell differentiation; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P:apoptosis; ISS.
P:base-excision repair;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F: DNA strand annealing activity; F: protein binding; ISS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F:Copper ion binding; ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P:caspase activation via cytochrome
                                                                                                                           55
                                                                             43552
                                               94.3%;
                                               .0%;
                                                                             ₹,
29
                                     0
                                             Score 99;
Pred. No.
                                                                                     N6-acetyllysine
N6-acetyllysine
                                                                                                                          similarity)

Phosphoserine (by HIPK2) (By similarity)

Phosphothreonine (by TAF1) (By
                                                                                                                                                                                                                     Zinc
                                                                                                                                                                                                                                                                                     Transcription activation (acidic). Interaction with WWOX (By similarity). Interaction with HIPK1 (By similarity). Interaction with AXINI (By similarity). Interaction with CARM1 (By similarity). Interaction with HIPK2 (By similarity).
                                                                                                                                                                                     Zinc (By similarity).
5'-phospho-RNA (covalent)
                                                                                                                                                                                                                             Nuclear export signal Zinc (By similarity).
                                                                                                                                                                                                                                                          Basic (repression 
Bipartite nuclear
                                                                                                                                                                                                                                                                                                                                                                     Cellular tumor antigen p53 /FTId=PRO_0000185715.
                                                                                                         N6-acetyllysine
                                                                                                                  similarity)
                                                                                                                                                         Phosphothreonine
                                                                                                                                                                  Phosphoserine (by
                                                                                                                                                                             similarity)
                                                                                                                                                                                                                                                                               Oligomerization.
                                                                                                                                                                                                                                                                                                                                                           By similarity
                                                                                                                                                                                                                                                                                                                                                  Interaction with HRMT1L2
                                                                             FD9F36603945A1FA
                                       Mismatches
                                                                                                                                                                                                                     (By similarity)
                                                                                                                                                                                                           (By similarity)
                                  DB 1; L. 3. 2.9e-06; 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ISS.
                                                                                    (By similarity).
(By similarity).
(By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              growth; ISS ISS.
                                                                                                                                                        (by VRK1)
                                                       Length 393
                                                                                                                                                                   PRPK)
                                                                                                                                                                                                                                                          of DNA-binding).
localization signal
                                                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSI
                                                                                                                                                                                                                                        (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>ი</u>
                                                                                                                                                                  (By similarity).
                                                                                                                                                                                                                                                                                                                                        (By similarity) (acidic).
                                                                                                                                                                                       ŒΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SSI
                                                                                                                                                          ξBy
                                      0
                                                                                                                                                                                                                                                           (By
                                      0
```

RESULT 14
OSUGE4 HUMAN
ID QSUGE4 HUMAN
PRELIMINARY; PRT; 393 AA.
AC QSUGE4;
DT 07-DEC-2004, integrated into UniProtKB/TrEMBL
DT 07-DEC-2004, sequence version 1.

```
RESULT 15
Q2XN98 H
Q2XN98 H
AC Q2XN98;
DT 20-DEC-2
DT 20-DEC-2
DT 20-DEC-2
DT 20-DEC-2
DT Name-TP5
GN Name-TP5
OS Homo sap
OC Mammalia
OC Mammalia
OC NCBI Tax
RN [1]
RP NUCLEOTI
RP PUMMdel-1
RA PUMMdel-1
RA Bourdon
                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR002117; P
InterPro; IPR011615; P
InterPro; IPR012346; P
InterPro; IPR010991; p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMR; Q500
SMR; Q500
Ensembl;
G0; G0:00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00870; P53; 1.
Pfam; PF07710; P53 tetramer; 1.
PRINTS; PR00386; P53sUPPRESSR.
ProDom; PD002681; P53; 1.
PROSITE; PS00348; P53; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-FEB-2006, entry version 10.
Tumor protein p53 (Li-Fraumeni syndrome).
Homo sapiens (Human).
TISSUE=Normal colon;
PubMed=16131611; DOI=10.1101/gad.1339905;
Bourdon J.C., Fernandes K., Murray-Zmijewski F.,
                                                                                                                                                                                                                    Q2XN99;
20-DEC-2005, integrated into UniProtKB/TrEMBL.
20-DEC-2005, sequence version 1.
07-MAR-2006, entry version 4.
                                                                                                                               Bukaryota; Metazoa;
Mammalia; Butheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Activator; Anti-oncogene; Apoptosis; Cell cycle; Metal-binding; Nuclear protein; Phosphorylation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                           QZXN98_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Transcription regulation; Zinc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Phelan M., Farmer A.; "Cloning of human full-length CDSs in BD Creator(TM)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUCLEOTIDE SEQUENCE.
Kalnine N., Chen X.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
                                                          NUCLEOTIDE SEQUENCE.
                                                                                        NCBI_TaxID=9606;
                                                                                                                                                                   Homo sapiens (Human)
                                                                                                                                                                                        Name=TP53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vector.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Koundinya M., Raphael J., Moreira D., Kelley T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GO:0005634; C:nucleus; IEA.
GO:00046872; F:metal ion binding; IEA.
GO:0003700; F:transcription factor activity; IEA.
GO:0008270; F:zinc ion binding; IEA.
GO:0008270; F:zinc ion binding; IEA.
GO:0006915; P:apoptosis; IEA.
GO:0007049; P:cell cycle; IEA.
GO:0007049; P:cell cycle; IEA.
GO:0006356; P:regulation of progression through . . . .
GO:0006350; P:transcription; IEA.
                                                                                                                                                                                                       protein.
                                                                                                                                                                                                                                                                                                                                                                                     12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BT019622; AAV38428.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                       μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                    PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENSG00000141510; Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  393
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₽
;
                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  43730 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; P53.
; P53_DNA_bd.
; P53_RUNT_DNA_bd.
; p53_tetrameristn.
                                                                                                                            Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini; Homin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rolfs A., Halleck A., Hines L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 99; DB; Pred. No. 2.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6610C5F3491C530E CRC64;
                                                                                                                                                                                                                                                                                               393 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2; Le
2.9e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LaBaer J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Transcription;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eisenstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              System
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                 Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Donor
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . ა
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
```

Liu G.,

Diot

**₽** 

```
밁
                         Ś
                                                  Query Match
Best Local S
Matches 18
                                                                                                        EMBL; DQ286964; ABB80266.1; -; mRNA.
EMBL; DQ191317; ABB80262.1; -; mRNA.
Activator; Anti-oncogene; Apoteonis; Cell cycle; DNA-binding; Metal-binding; Notein; Phosphorylation; Transcription; Transcription; Zinc.
SEQUENCE 393 AA; 43712 MW; AC611E4938C7EC3B CRC64;
                                                                                                                                                                                                     Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                         "p53 isoforms can regulate p53 transcriptional activity."; Genes Dev. 19:2122-2137(2005).
                                                                                                                                                                                                                                                                        Xirodimas D.P.,
12
                  1 PPLSQETFSDLWKLLPEN
                                                  l Similarity
18; Conserv
 PPLSQETFSDLWKLLPEN
                                                  94.3%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                        Saville M.K.,
                                                 0;
                          18
  29
                                                                   Score 99;
Pred. No.
                                                                                                                                                                                                                                                                        Lane D.P.;
                                                       Mismatches
                                                                  DB 2; Lo
                                                                                Length 393;
                                                       Indels
                                                     0
                                                       Gaps
                                                       0
```

Search completed: July Job time: 296 secs ņ 2006, 22:45:46

GenCore version 5.1.9 Copyright (c) 1993 - 2006 Biocceleration Ltd.

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM protein - protein search, using sw model
                                                                                                                                                          Database
                                                                                                                                                                                                                                                                                                    Total number of
                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                  seq length: 0 seq length: 2000000000
                                                                                                         A_Geneseq_8:*
1: geneseqp198
2: geneseqp199
3: geneseqp200
                                                                                                                                                                                                                                                                                               hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                2589679 seqs, 457216429 residues
                                                                                                                                                                                                                                                                                                                                                             Gapop
                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-403-440A-2
105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         July
                                                                                                                                                                                      Maximum Match 100%
Listing first 45 su
                                                                                                                                                                                                                                                                                                                                                                                                            PPLSQETFSDLWKLLPENG 19
                geneseqp2004s:*
geneseqp2005s:*
                                                                                                         geneseqp1980s:*
geneseqp2000s:*
                                                            geneseqp2002s:*
geneseqp2003as:*
                                             geneseqp2003bs:*
                                                                                            geneseqp2001s:*
geneseqp2006s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5, 2006, 22:37:11; Search time 196 Seconds (without alignments)
                                                                                                                                                                                                                                                                                                                                                             10.0,
                                                                                                                                                                                                                                                                                                                                                               Gapext 0.5
                                                                                                                                                                                       summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (without alignments)
44.322 Million cell updates/sec
                                                                                                                                                                                                                                                                                                   2589679
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived γď analysis of the total score distribution

SUMMARIES

23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	თ	ហ	.4	ω	2		Result No.
99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	105	105	Score
94.3	94.3	94.3	94.3	94.3	94.3			94.3	94.3		94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	100.0	100.0	Query Match 1
71	68	64	64	64	64	64	64	64	52	50	41	36	32	32	32	26	25	25	20	18	19	19	Length 1
2	7	N	N	N	N	N	N	N	N	8	N	N	છ	Ф	4	N	ผ	N	δ	N	N	N	BB
AAW47079	ADB71206	AAW94303	AAW42970	AAW42878	AAW57240	AAW48243	AAW07886	AAR42174	AAW13602	ADT02859	AAW13603	AAW13604	ADZ48535	ADJ25788	AAB30523	AAW60202	AAR51879	AAR54907	AAE30863	AAW37228	AAW82319	AAW82321	HD
	Adb71206 Human p53	Aaw94303 Human MDM	Aaw42970 N-termina	Aaw42878 N-termina	Aaw57240 Human p53	Aaw48243 Human p53	Aaw07886 Human p53		Aaw13602 p53 prote	Adt02859 Human p53	Aaw13603 p53 prote	Aaw13604 p53 prote	Adz48535 Human p53	Adj25788 MDM2 bind	Aab30523 Peptide f	N	Aar51879 Human p53	Aar54907 Immunodom	Aae30863 EGFP-BOX-	Aaw37228 p53 N-ter	Aaw82319 p53 homol	Aaw82321 p53 homol	ption

This sequence is a peptide homologue of a region of p53 which binds to mdm2. This peptide is used in the construction of a novel agent capable of disrupting the binding of p53 and mdm2 or inhibiting the production of mdm2 in a population of cells. This agent is also used in the preparation of a therapeutic for activating p53, where the population of cells do not overexpress mdm2. Inhibiting mdm2 production and/or inhibiting the binding of mdm2 to p53 allows level p53 to increase by reducing the clearance of p53 by mdm2, and can be used to activate p53 function. The agents for use in therapeutics for activating p53 can be used for the treatment of cancer, viral conditions or other conditions associated with

non-functional p53

New substance with a mdm2 binding domain and coupling partner  $\cdot$  useful for stabilising in cells without an efficient mdm2-mediated degradation

WPI; 1998-609975/51.

Lane DP;

Disclosure; Fig 1; 52pp; English.

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24
99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
94.3	94.3					94.3						94.3		94.3						94.3	94.3
353	343	341	337	293	283	261	260	241	225	211	164	161	73	73	73	73	73	73	73	73	73
Ð	7	00	N	7	4.	w	4.	N	4.	4	Α,	4.	10	10	10	10	10	10	10	10	10
AAE35350	AAE39685	ADN34522	AAW13962	AAE39686	ABG01512	AAY70714	ABG03222	AAR51872	AAB36690	AAB36685	AAB36689	AAB36683	AEE18140	AEE18139	AEE18144	AEE18137	AEE18125	AEE18138	AEE18143	AEE18142	AEE18141
_	Aae39685 Human	Adn34522 Human	Aaw13962 Chi	Aae39686 Human	Abg01512 Novel	Aay70714 Human	Abg03222 Novel	Aar51872 Human	Aab36690 Mam	Aab36685 Man	Aab36689 Mam	Aab36683 Man	Aee18140 Hu	Aee18139 Hu	Aee18144 Hu	Aee18137 Hu	Aee18125 Hu	Aee18138 Hu	Aee18143 Hu	Aee18142 Hu	Aee18141 Hu
		nan p53	Chimeric	nan p53	•	nan p35	•	nan p53	Mammalian	Mammalian	Mammalian	Mammalian	Human p53								

ALIGNMENTS

## 29-OCT-1998. Synthetic. p53 homologue TIP peptide. (UYDU-) UNIV DUNDEE 22-APR-1997; 20-APR-1998; WO9847919-A1 p53; mdm2; inhibitor; therapy; activator; treatment; cancer; medicament. 22-FEB-1999 AAW82321; AAW82321 standard; peptide; 19 (first entry) 97GB-00008089 98WO-GB001140. B

```
AAW37228
ID AAW3
XX
AC AAW3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 2
AAW82319
ID AAW8
                                                                                                                                       QS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                               밁
                                                                               5
                                    RESULT 3
                                                                                                   Query Match
Best Local S
Matches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                              This sequence is a peptide homologue of a region of p53 which binds to mdm2. This peptide is used in the construction of a novel agent capable of disrupting the binding of p53 and mdm2 or inhibiting the production of mdm2 in a population of cells. This agent is also used in the preparation of a therapeutic for activating p53, where the population of cells do not overexpress mdm2. Inhibiting mdm2 production and/or inhibiting the binding of mdm2 to p53 allows levels of p53 to increase by reducing the clearance of p53 by mdm2, and can be used to activate p53 function. The agents for use in therapeutics for activating p53 can be used for the treatment of cancer, viral conditions or other conditions associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 19
                                                                                                                                                                                                                                                                                       New agents which inhibit interaction of p53 and mdm2 - useful activating p53, e.g. for treating cancers, viral conditions of conditions associated with non functional p53 or mdm2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             p53 homologue
 AAW37228;
                  AAW37228 standard; peptide; 18 AA
                                                                                                                                       Sequence 19
                                                                                                                                                                                                                                                                                                                                                                                                                       29-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9847525-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           p53; mdm2; inhibitor; therapy; activator; treatment; cancer; medicament.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW82319;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW82319 standard;
                                                                                                                                                          non-functional p53
                                                                                                                                                                                                                                                                     Disclosure; Fig 1; 52pp; English.
                                                                                                                                                                                                                                                                                                                             WPI; 1998-609932/51.
                                                                                                                                                                                                                                                                                                                                               Lane DP
                                                                                                                                                                                                                                                                                                                                                                (UYDU-) UNIV DUNDEE
                                                                                                                                                                                                                                                                                                                                                                                  22-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                    20-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19;
                                                                                                  l Similarity
19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 PPLSQETFSDLWKLLPENG 19
                                                                                  μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPLSQETFSDLWKLLPENG 19
                                                                                 PPLSQETFSDLWKLLPENG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΑĄ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                       AA;
                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TIP peptide.
                                                                                                                                                                                                                                                                                                                                                                                   97GB-00008092
                                                                                                                                                                                                                                                                                                                                                                                                     98WO-GB001144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100
                                                                                                           100.0%; Score 105; DB 2; 100.0%; Pred. No. 1.7e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 105; DB 2;
Pred. No. 1.7e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                    Mismatches
                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 19
                                                                                                                     Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                 ul for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                    0
                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                    0;
 RESULT 4
AAE30863
ID AAE3
XX
AC AAE3
AC AAE3
AC AAE3
XX
AC EGFF
XX
DE EGFF
                                                                                                                                                                                      밁
                                                                                                                               S
                                                                                                                                                  Matches
                                                                                                                                                                  Query Match
                                                                                                                                                                                                       site in p53, wild-type p5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-JUL-1996;
07-APR-1997;
                                                                                                                                                                                      Sequence 18 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (NOVS )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumour;
                             24-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9801467-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                            Local
                                                                                                               س
```

```
binding of MDM2 to the human p53 protein, in vitro or in vivo. Inhibiting the interaction between the p53 and MDM2 can induce growth arrest or apoptosis in tumour cells comprising a wild-type p53 and non-elevated levels of MDM2. The peptides may be used to identify molecules that bind to MDM2 and to identify and design inhibitors of MDM2/p53 binding. They may also be used to purify binding partners especially MDM2, diagnose disease by measuring levels of MDM2 in blood of cancer and leukaemia patients and for treatment or prevention of disease involving p53/MDM2 interactions, especially tumours and viral infections. The peptides can be administered nasally, rectally, orally or by injection. By interfering with MDM2/p53 interaction, the peptides can activate p53 function and accumulation in normal cells. The peptides which mimic the MDM2 binding site in p53, have a significantly greater blocking activity compared with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         assay for analysing the interaction between human oncogenic protein MD and p53. The invention provides peptide derivatives capable of binding the human MDM2. These peptides can specifically inhibit or block the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Compounds binding to MDM2 protein and inhibit its useful in, e.g. diagnosis and treatment of cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lane D, Boettger V,
Garcia-Echeverria C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This represents a p53 N-terminal peptide fragment used in an Blisa TIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 34; 45pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1998-100996/09.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           p53 N-terminal peptide fragment for Elisa TIP assay.
EGFP-BOX-1 domain phospho-peptide used
                                                                                                                                                            AAE30863 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-JUL-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    identifying binding agents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         oncogenic protein; p53;; diagnosis; binding;
                                                                                                                                                                                                                                                                                                                                                                                                     11 Similarity
                                                                                                                                                                                                                                                                                                                       1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NOVARTIS AG.
                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96GB-00014197.
97GB-00007041.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97WO-EP003549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAMPAIGN TECHNOLOGY.
                                                                                                                                                                                                                                                                                                                                                                                             94.3%; but
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chene P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  p53; human; inhibition; interaction; cancer;
ng; viral infection; Elisa TIP assay.
                                                                                                                                                                                                                                                                                                   18
                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A,
Furet P;
                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Picksley
     in the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2; Le
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hochkeppel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   interaction with p53 and viral infections
                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MDM2
                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
RESULT 5
AAR54907
ID AAR5
XX AAR5
AC AAR5
XC AAR5
XC Immu
XX Immu
XX Canc
KW immu
KW trar
XX Homc
XX Hom

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a peptide for use in modulating the binding of p53 polypeptide to a p300 polypeptide. The new peptide is useful in modulating the binding of a p53 polypeptide to a p300 polypeptide. The peptide may be used to regulate the mammalian cell cycle or to induce or prevent cell death, for the treatment of cancer or ischaemia. The invention is useful in gene therapy. The present sequence is EGFP-BOX-1 domain phospho-peptide used in the exemplification of the invention
                                                                                                                                                                                                                11-MAY-1994.
                                                                                                                                                                                                                                                                                                                                                               transformation-associated protein.
                                                                                                                                                                                                                                                                                                                                                                                   cancer; pre-cancerous state; detection; diagnosis; human p53
immunodominant epitope; human cellular tumour antigen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-MAR-2003
29-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR54907 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New peptide for modulating the binding polypeptide, useful for regulating the treatment of cancer or ischemia.
                         Soussi T,
                                                                                                                     02-NOV-1992;
                                                                                                                                                                  02-NOV-1993;
                                                                                                                                                                                                                                                                 WO9410306-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Immunodominant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR54907;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             p53 polypeptide; p300 polypeptide; cell cycle; cell death; gene therapy; cancer; ischaemia; cytostatic; vasotropic.
                                                                       (EURO-) LAB EUROBIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Page 22; 87pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2003-018623/01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hupp TR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UYDU-) UNIV DUNDEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-FEB-2001; 2001GB-00003508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-FEB-2002; 2002WO-GB000640.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unidentified
                                                                                                                                                                                                                                                                                                                 sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dornan D;
                      Lubin R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                                                          epitope from p53 N-terminal
                                                                                                                     92FR-00013110
                                                                                                                                                                     93WO-FR001082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94.3%;
                      Legros
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 6; 1cm, 3. 1.7e-08; 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of p53 polypeptide to mammalian cell cycle f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             p300
for the
                                                                                                                                                                                                                                                                                                                                                                                                             gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
```

```
RESULT 6
AAR51879
뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 18
                                 Antibodies specific for p53 are detected by binding to immobilised fragments of the p53 gene product containing the antibody-binding region. Preferred fragments contain amino acids 1-241, 40-349, 40-393, 66-241, 66-393, 237-349, 237-393 and esp. 9-33, 37-52 or 368-386. See AARS1872-R51881 for requences of these fragments. (Updated on 25-MAR-2003 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptides derived from the N-terminal (amino acids 1-112) or the C-terminal (amino acids 350-393) of protein p53 which specifically react with anti-p53 antibodies in patients with cancer or precancerous conditions are claimed. The peptides (AAR54907-R54921) are useful for detecting and monitoring cancerous and precancerous conditions. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                     Non-radioactive detection of p53 specific antibodies - by capture immobilised p53 or its fragments, then reaction with labelled seccantibody, for diagnosis of tumours and suitable for screening.
                                                                                                                                                                                                                                                                                                                                                                                                          Human nuclear phosphoprotein p53; tumour suppressor gene product; anti-oncogene; cancer; tumour; antibody binding region; epitope.
Sequence
                                                                                                             Claim 11; Page 19; 35pp; German
                                                                                                                                                                                                      WPI; 1994-135732/16.
                                                                                                                                                                                                                                                                               30-SEP-1992;
                                                                                                                                                                                                                                                                                                         30-SEP-1993;
                                                                                                                                                                                                                                                                                                                                  14-APR-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-MAR-2003
18-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR51879 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 25 AA;
                                                                                                                                                                                                                             Zentgraf H,
                                                                                                                                                                                                                                                      (DEKR-)
                                                                                                                                                                                                                                                                                                                                                         WO9408241-A1
                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR51879;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 4; Page 42; 62pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New immuno:dominant epitope(s) of protein p53 - for detecting and monitoring antibodies indicative of cancer and precancerous states
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1994-167463/20
                                                                                                                                                                                                                                                                                                                                                                                                                                                  p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       l Similarity
18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                       DEUT
                         PN
                                                                                                                                                                                         AAQ62365
25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                  amino
A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (revised)
(first ent
                                                                                                                                                                                                                              Schranz
                                                                                                                                                                                                                                                      KREBSFORSCHUNGSZENTRUM STIFTUNG
                                                                                                                                                                                                                                                                               92DE-04232823
                                                                                                                                                                                                                                                                                                         93WO-EP002666
                                                                                                                                                                                                                                                                                                                                                                                                                                                 acids 9-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94.3%;
                                                                                                                                                                                                                             ۵,
                                                                                                                                                                                                                              Volkmann M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 99; DB; Pred. No. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₿
                                                                                                                                                                                                                              Tessmer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 2;
,. 2.1e-08;
0;
                                                                                                                                                                                                                             ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 25,
                                                                                                                                                                                                                              Klein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                               77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                  second
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

0

Query Match Best Local Similarity

94.3%;

Score Pred.

. No.

DB 2; I 2.1e-08;

Length

밁 Ş

```
RESULT 7
AAW60202
ID AAW6
XX AAW6
XX AAW6
XX P53
XX P65
PT P55
PT P65
PT
RESULT 8
AAB30523
ID AAB3
XX
AC AAB3
XX
DT 06-M
XX
                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptides AAM60202-05 are derived from human p53 protein. The present peptide corresponds to residues 11-35. The pptides are used in the method of the invention Antibodies that bind to p53 protein are detected by immobilising a p53 peptide directly on to a flow cell of a sensor chip in a biosensor, treating the peptide with a sample of patient serum, diluted in buffer, and measuring binding of antibody to the peptide using the biosensor. The method is used to monitor cancer patients undergoing p53 gene therapy (to determine if an immune response has developed), and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Detecting antibodies that bind p53 by reaction with immobilised p53 peptide(s) - attached directly to flow cells in the sensor chip of biosensor, used to analyse serum from cancer patients, e.g. those being given p53 gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAW60202
                          06-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW60202 standard; peptide; 26
                                                                        AAB30523;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 4; Page 5; 41pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1998-240965/21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9815834-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       p53 gene therapy; immune response; mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; p53; antibody; detection; biosensor; cancer patient;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           p53 peptide used to detect antibodies against p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-AUG-1998
                                                                                                                 AAB30523
                                                                                                                                                                                                                                                                                                                                                                                                                                                               also to detect antibodies against mutant forms of p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (SCHE ) SCHERING CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      domo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18;
                                                                                                                                                                                                                                  w
                                                                                                                                                                                                                                                                               ۲
                                                                                                                                                                                                                                                                                                                           18;
                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PPLSQETFSDLWKLLPEN
                                                                                                                   standard;
                                                                                                                                                                                                                                                                             PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                  PPLSQETFSDLWKLLPEN 20
                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Swanson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96US-0028533P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97WO-US016132
                                                                                                                 peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SJ;
                                                                                                                                                                                                                                                                                                                                                94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                 32
                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                Score 99;
Pred. No.
                                                                                                                   Ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                DB 2; L
. 2.2e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                    Length 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                           0
RESULT 9
ADJ25788
ID ADJ2
XX
AC ADJ2
XX
AC ADJ2
XX
AC ADJ2
                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The specification describes a method of synthesis of biologically active CC substances of determined structure directly in the cells of living CC organisms containing specific RNA or DNA sequence. The method is based on CC the hybridisation of two or more oligomers bound with biologically CC inactive substances to specific RNA or DNA in vivo in the cells of living CC organisms. After hybridisation of the oligomers, the biologically CC inactive precursors bound to the oligomers can interact with each other CC to make the active form of the substances. This changing of properties is CC due to chemical reactions which bind the biologically inactive precursors CC through a chemical bond into a biologically active form of the whole compound. The methods are useful for producing biologically active compounds from inactive precursors. These compounds may be inhibitors or Stimulators of cellular metabolism, DNA replication, RNA transcription, CC RNA translation, RNA elongation RNA processing, protein synthesis, CC protein processing, cellular protein and RNA transportation, processes of CC cellular oxidation, toxins, proteins or RNAs. AAB30523-36 represent CC peptides are fragments of the tumour suppressor p53, and the oligomers and CC norduce the tumour suppressor p53, and the oligomers and CC unreduce the tumour suppressor p53 from the bound postides and
                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                             Best Local
                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNA transcription; RNA translation; RNA elongation; RNA processing; protein synthesis; protein processing; cellular differentiation; cell division; ion channel transmission; cellular protein; toxin;
    20-MAY-2004
                                                                                             ADJ25788 standard; peptide; 32
                                                                                                                                                                                                                                                                                                                                                                                              Sequence 32 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 8; Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                producing proteins or polynucleotides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel methods for the synthesis of biologically active compounds inactive precursors in the cells of living organisms, useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-006911/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sergeev
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  plasminogen antigen activator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Biologically active compound; cellular metabolism; DNA replication;
                                                ADJ25788;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 produce the tumour suppressor protein p53 from the bound peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200061775-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RNA transportation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide fragment of a tumour suppressor protein p53
                                                                                                                                                                                                            12
                                                                                                                                                                                                                                                                                                       18;
                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SERGEEV
                                                                                                                                                                                                                                                     PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                       Conservative
    (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-IB000616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99WO-IB000616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29; 65pp; English
                                                                                                                                                                                                                                                                                              94.3%; bu
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cellular oxidation; tumour suppressor p53;
                                                                                                                                                                                                              29
                                                                                                                                                                                                                                                                                                                             Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                             DB 4; Le 2.8e-08;
```

g Ş

Length 32;

0

Gaps

0

ô

```
RESULT 10
ADZ48535
ID ADZ48
XX Human
XX Human
XX Homo
XX Homo
XX US200
XX US200
XX ADZ48
                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31-OCT-1996;
31-OCT-1997;
31-MAR-1998;
                                                                                                                        Human p53
                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a method of identifying a ligand that can mediate the biological activity of target protein via inhibition of the binding of target protein to a binding partner ligand comprising screening first combinatorial library having first member ligands for binding to target protein to identify target—binding ligand(s). The method is useful for identifying ligands that can mediate the biological activity of target proteins via inhibition of the binding of target proteins to a binding partner ligand. The invention does not require that the natural binding partner be used as reagent. The need for the natural binding partner be used as reagent. The need for the natural binding partner be used as reagent. The need for the natural binding partner be used as reagent.
                                                                                                                                                   16-JUN-2005
                                                                                                                                                                                ADZ48535
                                                                                                                                                                                                                                                                                                                                                                                           Sequence 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Identification of ligand that can mediate biological activity of target protein, comprises screening first combinatorial library having first member ligands for binding to target protein to identify target-binding
               31-MAR-2005
                                          US2005069951-A1
                                                                                           combinatorial library; peptide library; p53
                                                                                                                                                                                                         ADZ48535 standard; peptide; 32 AA
                                                                                                                                                                                                                                                                                                                                                                                                                     present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US6617114-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ligand identification; peptide library; complementary combinatorial library; MDM2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 3; SEQ ID NO 48; 98pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ligand(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2004-068186/07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fowlkes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDM2 binding peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (KARO-) KARO
                                                                                                                                                                                                                                                                              12
                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MG,
                                                                                                                                                                                                                                                                            PPLSQETFSDLWKLLPEN 18
                                                                                                                        peptide SEQ ID NO:48
                                                                                                                                                                                                                                                                                                                                                                                          Ą,
                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          віо
                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kay BK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96US-00740671.
97WO-US019638.
98US-00050359.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98US-00069827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ΑB
                                                                                                                                                                                                                                                                                                                                                94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Frelinger JA,
                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hyde-Deruyscher
                                                                                                                                                                                                                                                                                                                                                DB 8; Lo
                                                                                                                                                                                                                                                                                                                                                           Length 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RΡ
                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                   0
```

```
á
                                                                                                                              CC first library, obtaining ligands which inhibit the binding of target conding ligands to a target protein by screening second member ligands of a second library, and determining inhibitory ligands mediating activity cof the target protein. Also described is a method for identifying a pair cC of ligands, the first ligand of the pair binding to a target protein, and cC the second ligand of the pair inhibiting the binding of the first ligand cC to the target protein, which involves: (a) screening the first ligand cC combinatorial library comprising several first member ligands for binding cC combinatorial protein, thus identifying one or more target binding cC ligands; and (b) screening the second library comprising several second cC member ligands for the ability to inhibit the binding several second comprise in the second library is not identical to the first library, the first ligands to the target protein, thus obtaining one or more carget binding cC first member ligands of the first library is not identical to the first library, the second library is not identical to the comprise antibody-like domains. (M1) is useful for identifical to the pair cC ligand which can mediate the binding of the second library, and when the cC ligand which can mediate the binding of a target protein kinase (protein kinase (protein which can be one associated with human cytomegalovirus, DNA polymerase accessory protein kinase cotation of century vital infection such as human cytomegalovirus infection, and cotation of compounds in a compound library which ccan mediate the binding of a target protein kinase cotation of compounds in a compound library which ccan mediate the activity through binding to the receptor are contained. The precent sequence represents a human p53 peptide contained to the second library which ccan mediate the activity through binding to the receptor are contained to the protein and contained to the protein are contained to the protein and contained to the protein and contained to the receptor are contained t
                                           Matches
                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31-OCT-1996;
31-OCT-1997;
31-MAR-1998;
30-APR-1998;
                                                                                                                          Sequence 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a method (MI) for identifying a ligand which can mediate the biological activity of a target protein via inhibition of the binding of a target protein to a binding partner. The method comprises identifying target-binding ligands by screening first member ligands of a first library, obtaining ligands which inhibit the binding of target-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Identifying ligand mediating activity of target protein, by screening ligand libraries to obtain target-binding ligands and ligands inhibiting binding of target-binding ligand to target, determining ligands inhibiting activity of target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (FOWL/)
(KAYB/)
(FREL/)
                                                                                                                                                                   not already known.
which is used in a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 3; SEQ ID NO 48; 108pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2005-353255/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fowlkes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-SEP-2003; 2003US-00656250
                                                                 Local Similarity
                                         18;
1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ,
Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FRELINGER J A.
HYDE-DERUYSCHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FOWLKES D M.
KAY B K.
                                                                                                                            A
A
                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kay BK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96US-00740671.
97WO-US019638.
98US-00050359.
98US-00069827.
                                                                                                                                                                     an
                                                                                                                                                                   example from
                                                               94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Frelinger JA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              טי
                                           <u>,</u>
                                                                 Score 99;
Pred. No.
                                           Mismatches
                                                                                                                                                                 present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hyde-Deruyscher RP;
                                                               DB 9; L
                                                                                  Length 32;
                                           Indels
                                           <u>,</u>
                                           Gaps
```

밁

12

29

0,

```
AAM13604

AAM136
                                                                                                                                                                     RESULT 12
AAW13603
SAXAXE
                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The peptides AAW13602-6 represent peptide fragments derived from the wild Ctype human p53 protein. This peptide corresponds to amino acids 6-41 of Ct the p53 sequence. The peptides are claimed peptides which are able to Ct bind the N-terminal amino acids (1-134) of the murine double minute-2 (mdm2) protein (AAW13600). Mdm2 protein is a 90 kD phosphoprotein which CC binds and modulates the activity of the tumour suppressor protein p53. It CC has now been shown that the mdm2 protein itself has oncogenic properties, CC cycle arrest in G1 caused by over-expression of the p107 protein. The p53 CC cycle arrest in G1 caused by over-expression of the p107 protein. The p53 CC cycles are examples of antagonists of the invention which are able to CC inhibit the oncogenic activity of mdm2. The antagonists are used to treat CC e.g. adenocarcinoma of the colon; cancer of the breast, lung or stomach; CC myeloid leukaemia; B cell lymphoma, or other hyperproliferative conditions such as restenosis. Note: this sequence is not given in the CC specification but is constructed from the wild type human p53 sequence
                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Treating cancer with antagonist of oncogenic activity of protein Mdm2 or nucleic acid encoding an antagonist, also viral vectors contg. this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mouse; Mdm2; murine double minute; phosphoprotein; binding; modulation; tumour suppressor; p53; oncogene; cell cycle arrest; p107; antagonist; inhibition; transcription factor; adenocarcinoma; colon; cancer; breast; lung; stomach; myeloid leukaemia; lymphoma; hyperproliferative;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW13604 standard; peptide; 36
                           16-JAN-1998
                                                                                     AAW13603;
                                                                                                                                         AAW13603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 4; Page; 43pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nucleic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1997-192837/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tocque B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9709343-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         p53 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (RHON )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-SEP-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-SEP-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                           18;
                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                                                                        1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RHONE POULENC RORER SA.
INST NAT SANTE & RECH M
                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                         standard;
                                                                                                                                                                                                                                                                                         PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dubs-Poterszman M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ŋ,
                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         amino acids 6-41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first
                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95FR-00010331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96WO-FR001340
                                                                                                                                      peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                      94.3%;
                                                                                                                                                                                                                                                                                            24
                                                                                                                                            41
                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                           Score 99; DB; Pred. No. 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wasylyk B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDICALE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₿
                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2; Lo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                           0,
```

X S X E X E X E X S X E

ADT02859; 02-DEC-2004 (firs Human p53 protein

fragment,

target of

an

immunoassay SeqID

(first entry)

immunoassay; autoantibody; p53; human.

JP2004231535-A

Homo sapiens

```
밁
                                                                                                                      Ś
                                                                                                                                                                                                                               The peptides AAW13602-6 represent peptide fragments derived from the wild CC type human p53 protein. This peptide corresponds to amino acids 1-41 of CC the p53 sequence. The peptides are claimed peptides which are able to CC bind the N-terminal amino acids (1-134) of the murine double minute-2 (mdm2) protein (AAW13600). Mdm2 protein is a 90 kD phosphoprotein which CC binds and modulates the activity of the tumour suppressor protein p53. It CC binds and shown that the mdm2 protein itself has oncogenic properties, especially in a p53-mull background. Mdm2 is observed to unblock cell CC cycle arrest in G1 caused by over-expression of the p107 protein. The p53 CC speptides are examples of antagonists of the invention which are able to CC inhibit the oncogenic activity of mdm2. The antagonists are used to treat CC e.g. adenocarcinoma of the colon, cancer of the breast, lung or stomach; myeloid leukaemia; B cell lymphoma, or other hyperproliferative CC conditions such as restenosis. Note: this sequence is not given in the CC specification but is constructed from the wild type human p53 sequence
                                                                                                                                                         Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mouse; Mdm2; murine double minute; phosphoprotein; binding; modulation; tumour suppressor; p53; oncogene; cell cycle arrest; p107; antagonist; inhibition; transcription factor; adenocarcinoma; colon; cancer; breast lung; stomach; myeloid leukaemia; lymphoma; hyperproliferative;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Treating cancer with ant
or nucleic acid encoding
 ADT02859 standard;
                                                                                                                                                                                                                             Sequence 41 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 4; Page; 43pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1997-192837/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tocque B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-SEP-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-SEP-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9709343-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            p53 protein amino acids 1-41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (RHON ) RHONE POULENC RORER SA.
                                                                                       12
                                                                                                                      1 PPLSQETFSDLWKLLPEN 18
                                                                                     PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dubs-Poterszman M,
                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95FR-00010331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96WO-FR001340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 with antagonist of oncogenic activity of protein Mdm\,2 encoding an antagonist, also viral vectors contg. this
protein;
                                                                                                                                                                           94.3%;
                                                                                       29
 50
                                                                                                                                                           0,
                                                                                                                                                                           Score 99; pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wasylyk B;
 Ą
                                                                                                                                                             Mismatches
                                                                                                                                                                           DB 2; L
                                                                                                                                                             0,
                                                                                                                                                                                          Length 41;
                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cancer; breast;
                                                                                                                                                             0
                                                                                                                                                             Gaps
                                                                                                                                                             0
```

```
RESULT 14
AAW13602
ID AAW13
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This invention relates to a novel reagent used for performing an immunoassay for detecting autoantibodies with respect to the p53 gene product. Specifically, it refers to a sandwich method that involves assaying an anti-human immunoglobulin antibody to determine the presence or absence of an autoantibody with respect to the p53 gene product in a test substance (such as blood) and comparing these values with a standard control from a healthy subject. The present invention describes a method based on a chemiluminescent enzyme immunoassay. As such, it provides an accurate and sensitive assay that can be used to detect and diagnose a second control from the present invention describes and accurate and sensitive assay that can be used to detect and diagnose a
                                                                                                                                                                                                                                                                   Mouse; Mdm2; murine double minute; phosphoprotein; binding; modulation; tumour suppressor; p53; oncogene; cell cycle arrest; p107; antagonist; inhibition; transcription factor; adenocarcinoma; colon; cancer; breast lung; stomach; myeloid leukaemia; lymphoma; hyperproliferative;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Reagent for performing immunoassay for detecting autoantibody against p53 gene product, comprises amino acid sequence, in which 8-50 amino acids are essential structural unit.
                                                                                                                                         02-SEP-1996;
                                                                                                                                                                                                  WO9709343-A2
                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                             p53 protein amino acids 1-52
                                                                                                                                                                                                                                                                                                                                                                          16-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                        AAW13602
                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW13602 standard; peptide; 52 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                       Tocque B,
                                                                                                            04-SEP-1995;
                                                                                                                                                                      13-MAR-1997
                                                                                                                                                                                                                                                          restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2004-618712/60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JAN-2003; 2003JP-00019760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JAN-2003; 2003JP-00019760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (SANN ) SANYO CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      state.
                                                                    RHONE POULENC RORER SA.
INST NAT SANTE & RECH N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 1; 91pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLSQETFSDLWKLLPEN 24
                                       Dubs-Poterszman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA;
                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                NAT SANTE & RECH MEDICALE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This
                                                                                                              95FR-00010331.
                                                                                                                                         96WO-FR001340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polypeptide sequence is a human p53 protein fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94.3%;
                                       Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 99; DB 8; I
Pred. No. 4.5e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 50,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                    antagonist;
ancer; breast;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
RESULT 15
AAR42174
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The peptides AAW13602-6 represent peptide fragments derived from the wild CC type human p53 protein. This peptide corresponds to amino acids 1-52 of CC the p53 sequence. The peptides are claimed peptides which are able to CC bind the N-terminal amino acids (1-134) of the murine double minute-2 (mdm2) protein (AAW13600). Mdm2 protein is a 90 kD phosphoprotein which CC binds and modulates the activity of the tumour suppressor protein p53. It CC especially in a p53-null background. Mdm2 is observed to unblock cell CC cycle arrest in G1 caused by over-expression of the p107 protein. The p53 CC peptides are examples of antagonists of the invention which are able to CC inhibit the oncogenic activity of mdm2. The antagonists are used to treat c e.g. adenocarcinoma of the colon; cancer of the breast, lung or stomach; CC myeloid leukaemia; B cell lymphoma, or other hyperproliferative conditions such as restenosis. Note: this sequence is not given in the cCC specification but is constructed from the wild type human p53 sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
          Diagnosing neoplasia from amplification of MDM2 gene - or elevate expression, also new DNA, MDM2 protein, antibodies and treatment sarcoma by inhibiting MDM2 expression.
                                                                                                                                                            07-APR-1992;
23-JUN-1992;
                                                                                                                                                                                                                                                                                                                                                                                                   p53 gene; tumour suppressor gene; regulation; cellular proliferation; cellular transformation; carcinoma; human; tumour; MDM2; inhibition;
                                                                                                                                                                                                        07-APR-1993;
                                                                                                                                                                                                                                     14-OCT-1993.
                                                                                                                                                                                                                                                                                                             Binding-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                  p53 N-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-MAR-2003
05-MAY-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR42174;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR42174 standard; peptide; 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 52 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 4; Page; 43pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Treating cancer with antagonist of oncogenic activity of protein Mdm2 or nucleic acid encoding an antagonist, also viral vectors contg. this
                                                                      WPI; 1993-336944/42.
                                                                                                  Burrell M,
                                                                                                                                                                                                                                                                   WO9320238-A2
                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic
                                                                                                                                (UYJO ) UNIV JOHNS HOPKINS.
                                                                                                                                                                                                                                                                                                                                                                                       amplification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPLSQETFSDLWKLLPEN
                                                                                                  Hill DE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                               fragment
                                                                                                                                                            92US-00867840
92US-00903103
                                                                                                                                                                                                        93WO-US003199
                                                                                                                                                                                                                                                                                                               13.
                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                               /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94.3%; Score 99;
100.0%; Pred. No.
                                                                                                  Kinzler
                                                                                                                                                                                                                                                                                               "Site of interaction with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                  Vogelstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2; L
                                                                                                  Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                        or elevated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                        gene
```

0

ō,

```
Search completed: July 5, 2006, 22:40:46 Job time: 198 secs
                                                                                                                                                                                                                                                                                          Query Match 94.3%; Score 99; DB 2; Length 64; Best Local Similarity 100.0%; Pred. No. 5.9e-08; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence represents the product of the p53 gene. p53 is a tumour suppressor gene and this protein appears to be a member of a group of proteins which regulate normal cellular proliferation and suppression of cellular transformation. Inactivation of the p53 gene has been implicated in the formation, or progression of a wide variety of carcinoma. p53 is thought to interact with the protein product of a gene which is amplified in a number of human tumours, designated MDM2. Polypeptides containing at least amino acids 13-41 of p53, or the DNA encoding these, may be used to inhibit the growth of tumour cells containing MDM2 gene amplification. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 35; 75pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 64 AA;
                                                                                                                                               Length 64;
                                                                                                                                                                                                                                                                                                  ٥,
                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                  0
```

DЪ Ş &X2222222222X8

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run on:
     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                     Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq length: 0
seq length: 2000000000
     Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Published Applications AA Main:*

1: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US07_PUBCOMB.pep:*

2: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US08_PUBCOMB.pep:*

3: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US09_PUBCOMB.pep:*

4: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*

5: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*

6: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US11_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              July 5, 2006, 22:46:46 ; Search time 184 Seconds (without alignments) 47.832 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 PPLSQETFSDLWKLLPENG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2097797 seqs, 463214858 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-403-440A-2
105
    GenCore version 5.1.9 Copyright (c) 1993 - 2006 Biocceleration Ltd.
    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapext 0.5
                                                       α ω ν ν ν ν ν ο ω α α α α α α ω ω ω
 US-09-214-371-74
US-10-927-262A-74
US-10-125-059-10
US-10-125-059-11
US-10-125-059-11
US-10-125-059-11
US-10-125-059-11
US-10-125-059-11
US-10-125-059-11
US-10-125-059-11
US-10-125-059-11
US-10-125-059-13
US-10-125-059-13
US-10-125-059-13
US-10-125-01-03-33581
US-10-125-01-044-03-78
US-10-146-473-78
US-10-146-473-78
US-10-146-473-78
US-10-146-473-79
US-09-860-255A-8
US-10-696-255A-8
US-10-696-255A-9
US-10-696-255A-9
US-09-736-384-3
US-09-860-211-9
US-09-860-286-9
US-10-274-874-4
                                                                                                                                                                                                                                                                                                                                                                     IJ
                                                                                                                                                                                                                                                                                                                                                                                                           SUMMARIES
Sequence 74, Appl
Sequence 74, Appl
Sequence 8, Appli
Sequence 10, Appl
Sequence 11, Appl
Sequence 16, Appl
Sequence 3, Appli
Sequence 3, Appli
Sequence 31871, A
Sequence 24, Appl
Sequence 24, Appl
Sequence 24, Appl
Sequence 24, Appl
Sequence 7, Appli
Sequence 8, Appli
Sequence 7, Appli
Sequence 7, Appli
Sequence 7, Appli
Sequence 7, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 4, Appli
Sequence 9, Appli
                                                                                                                                                                                                                                                                                                                                                                    Description
```

Sequence 74, Application US/10927262A
Publication No. US20050137137A1
GENERAL INFORMATION:
APPLICANT: LANE, DAVID P
APPLICANT: BOTTGER, VOLKER
APPLICANT: BOTTGER, VOLKER
APPLICANT: PICKSLEY, STEVEN M.
APPLICANT: HOCKKEPPEL, HEINZ-KURT
APPLICANT: GARCIA-EGLEVERRIA, CARLOS
APPLICANT: CHENE, PATRICK

RESULT 2 US-10-927-262A-74

D Qy	US RE	
Query Match Best Local Matches 1	מימשים מי	2 2 2 C C C C C C C C C C C C C C C C C
d 1	A-371-74 Lace 74 Applice 79 Applice 70 Applice 71 Appli	
94.3%; milarity 100.0% Conservative PLSOETFSDLWKLLPEN	pplicate 001001E ATION: ATION: ATION: Carion-Farage of the first of th	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
94.3 100. vative DLWKLLP 	ication US/09214 ON: ON: ON: ON: ON: ON: ON: Ser, Volker ger, Volker ger, Angelica sley, Stephen e, Patrick keppel, Heinz-Ku	
. 0 #;	/092 rica hica hica inz- ria, ria, pci 9CT 7-04-	4444444444
Score 99; DB 3; Pred. No. 9.7e 0; Mismatches 18	14371B  Kurt Carlos S of the Interacy 109/214,371B 26 126 126 126 127 128 1297/03549	US-10-160-290-2 US-10-077-176-54 US-10-077-176-56 US-10-077-176-56 US-10-077-176-57 US-10-392-113-31 US-10-165-216-4 US-10-191-121-3 US-10-191-121-3 US-10-391-068-2 US-10-491-510-9 US-10-633-789-1 US-10-716-259-25 US-10-716-259-25 US-10-716-259-25 US-10-716-259-25 US-10-724-25-4 US-10-724-25-4 US-10-456-238-4
Length 18; 08; 0; Indels	ion of P53 an	2000 000 000 000 000 000 000 000 000 00
0,	nd MDM2	sequence
Gaps	N	4 4 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
0		Appli Appli

```
RESULT 3
US-10-155-059-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-927-262A-74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 8, Application US/10155059
Publication No. US20020147173A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: PCT/EP97/03549
PRIOR FILING DATE: 1997-07-04
PRIOR APPLICATION NUMBER: GB 9614197.3
PRIOR FILING DATE: 1996-07-05
PRIOR APPLICATION NUMBER: GB 9707041.1
PRIOR APPLICATION NUMBER: GB 9707041.1
PRIOR FILING DATE: 1997-04-07
NUMBER OF SEQ ID NOS: 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: INHIBITORS OF THE INTERACTION BETWEEN P53 AND MDM2 FILE REFERENCE: 39749.0002 APC CON CURRENT APPLICATION NUMBER: US/10/927,262A CURRENT FILING DATE: 2004-08-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 09/214,371 PRIOR FILING DATE: 1999-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn Ver. 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: Description of Artificial Sequence: Synthetic OTHER INFORMATION: Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 18
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/081,975
FILING DATE: 12-MAY-1998
APPLICATION NUMBER: 60/046,207
FILING DATE: 12-MAY-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOST, Christine
TITLE OF INVENTION: METHODS OF TREATMENT USING
NES-1, ANTIBODIES AND PROT
             REGISTRATION NUMBER: 30,628
REFERENCE/DOCKET NUMBER: 47400
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-345-6054
                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Nixon Peabody LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Kaelin, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/10/155,059 FILING DATE: 24-May-2002 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows
SOFTWARE: FASTSEQ for Windows Version 2.0b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 101 Federal Street
                                                                                                     NAME: Eisenstein, Ronald I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: USA
TELEFAX: 617-345-1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FURET, PASCAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                02110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94.3%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 5; Le 9.7e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROTEINS THERETO, AND USES OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
RESULT 4
US-10-155-059-10
S-10-155-059-10
Sequence 10, Application US/10155059
Publication No. US20020147173A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-155-059-8
                                                                             US-10-155-059-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
   Matches
                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO: 8:
                                                                                                                                                                                                           TELEFAX: 617-345-1300
TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/081,975
PILING DATE: 12-MAY-1998
APPLICATION NUMBER: 60/046,207
PILING DATE: 12-MAY-1997
ATTORNEY/ACENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: ISM Compatible
OPERATING SYSTEM: Windows
SOFTWARE: FastSEQ for Windows Version 2.0b
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/155,059
FILING DATE: 24-May-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 27
CORRESPONDENCE ADDRESS:
ADDRESSEE: Nixon Peabody LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOST, Christine
TITLE OF INVENTION: METHODS OF TREATMENT USING
NBS-1, ANTIBODIES AND PROTEINS THERETO, AND USES OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE DESCRIPTION: SEQ ID NO: 8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 20 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 02110
COMPUTER READABLE FORM:
                                                                                                                                                                                         SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-345-6054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Kaelin, William
Jost, Christine
                                                                                            SEQUENCE DESCRIPTION: SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18;
   18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N
                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PPLSQETFSDLWKLLPEN 19
                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 30,628
REFERENCE/DOCKET NUMBER: 47400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 101 Federal Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                    STRANDEDNESS: single
                                                                                                                                                        TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                            NAME: Eisenstein, Ronald I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: USA
                                                                                                                                                                      LENGTH: 20 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ilarity 100.0%; I Conservative 0;
   Conservative
94.3%; Score 99; DB 4; L
100.0%; Pred. No. 1.1e-07;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94.3%; Score 99; DB 4; L
100.0%; Pred. No. 1.1e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 20;
                                         Length 20;
       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
     Gaps
       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

1 PPLSQETFSDLWKLLPEN 18

밁

```
RESULT 6
US-10-155-059-16
                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                    US-10-155-059-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 5
US-10-155-059-11
                                                                                                  Sequence 16, Application US/10155059
Publication No. US20020147173A1
GENERAL INFORMATION:
APPLICANT: Kaelin, William
                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 20 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 11, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dication No.
GENERAL INFORMATION:
APPLICANT: Kaelin, William
Jost, Christine
Jost, METHOD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 30,628
REFERENCE/DOCKET NUMBER: 47400
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-345-6054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/046,207
FILING DATE: 12-MAY-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows
SOFTWARE: FastSEQ for Windows Version 2.0b
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/155,059
FILING DATE: 24-May-2002
                                                                  JOST, Christine
TITLE OF INVENTION: METHODS OF TREATMENT USING
                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE DESCRIPTION: SEQ ID NO: 11:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: Nixon Peabody LLP
                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: METHODS OF TREATMENT USING NBS-1, ANTIBODIES AND PROTI
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                             18;
                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                          1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                   PPLSQETFSDLWKLLPEN 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/09/081,975 FILING DATE: 12-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PPLSQETFSDLWKLLPEN 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 617-345-1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Eisenstein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/10155059
No. US20020147173A1
                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101 Federal Street
                                                                                                                                                                                                                                                                                                                                          94.3%; Score 99; DB 4;
100.0%; Pred. No. 1.1e-
                 ANTIBODIES : 27
                                                     NBS-1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ronald I
                                                                                                                                                                                                                                                                                                                           0;
                                           ANTIBODIES AND PROTEINS THERETO, AND USES OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ANTIBODIES AND PROTEINS THERETO, AND USES OF THE
                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                            .1e-07;
                                                                                                                                                                                                                                                                                                                                                            Length 20
                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
```

```
GENERAL INFORMATION:

APPLICANT: Hupp, Theodore
APPLICANT: Dornan, David
TITLE OF INVENTION: Screening Method and Agents
FILE REFERENCE: 9013.54
CURRENT APPLICATION NUMBER: US/10/467,758
CURRENT FILING DATE: 2003-08-13
PRIOR APPLICATION NUMBER: PCT/GB02/00640
PRIOR PILING DATE: 2002-02-13
PRIOR PILING DATE: 2002-02-13
PRIOR PILING DATE: 2001-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; SEQUENCE DESCRIPTION: SEQ ID NO: 16: US-10-155-059-16
                                                                                                                                                          SOFTWARE: PatentIn version 3.1
SEQ ID NO 8
LENCTH: 20
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO: 16:
SEQUENCE CHARACTERISTICS:
LENGTH: 20 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 8, Application US/10467758 Publication No. US20040132108A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local 9
                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 43
FEATURE:
NAME/KEY: MOD_RES
LOCATION: (5)...(5)
OTHER INFORMATION: RESIDUE MAY OPTIONALLY BE PHOSPHORYLATED
                                                                                                               ORGANISM: Artificial Sequence FEATURE:
                                                                                             OTHER INFORMATION: EGFP BOX-1 PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/09/081,975
FILING DATE: 12-MAY-1998
APPLICATION NUMBER: 60/046,207
FILING DATE: 12-MAY-1997
ATTORNEY/AGENT INFORMATION:
NAME: Elsenstein, Ronald I
REGISTRATION NUMBER: 30,628
REFERENCE/DOCKET NUMBER: 47400
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows
SOFTWARE: FRESESQ for Windows Version 2.0b
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/155,059
FILING DATE: 24-May-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 02110
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 PPLSQETFSDLWKLLPEN 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity 100.0%; 18; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: 617-345-6054
TELEFAX: 617-345-1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Nixon Peabody LLP
STREET: 101 Federal Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Score 99; DB
%; Pred. No. 1.1
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.1e-07;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 4; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

0

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; LOCATION: (10\overline{1}...(10)); OTHER INFORMATION: RESIDUE MAY OPTIONALLY BE PHOSPHORYLATED US-10-467-758-8
                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                     US-10-918-643-3
                                                                                                                                                                                                                        RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
US-09-958-163A-3
                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-958-163A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE: Sergeev
CURRENT APPLICATION NUMBER: US/09/958,163A
CURRENT FILING DATE: 2001-10-03
NUMBER OF SEQ ID NOS: 44
SOFTWARE: Patentin version 3.2
SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 3, Application US/09958163A Publication No. US20030104389A1 GENERAL INFORMATION:
                                                                                                                                           Sequence 3, Application US/10918643 Publication No. US20050026143A1 GENERAL INFORMATION:
FILE REFERENCE: sergeev
CURRENT APPLICATION NUMBER: US/10/918,643
CURRENT FILING DATE: 2004-08-13
NUMBER OF SEQ ID NOS: 44
SOFTWARE: PatentIn version 3.2
SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                         APPLICANT: Sergeev, Pavel TITLE OF INVENTION: Synthesis of biologically
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: part of the amino acid sequence of the Human tumour supressor p5:
PUBLICATION INFORMATION:
AUTHORS: Harlow,E., Williamson,N.M., Ralston,R., Helfman,D.M. and
AUTHORS: Adams,T.E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Sergeev, Pavel TITLE OF INVENTION: Synthesis of biologically active compounds in cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:

NAME/KEY: MOD_RES

LOCATION: (8)...(8)

OTHER INFORMATION: RESIDUE MAY OPTIONALLY BE PHOSPHORYLATED
                                                                                                                                                                                                                                                                                                                                                                                                                                        DATABASE ACCESSION NUMBER: K03199
DATABASE ENTRY DATE: 1995-01-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ISSUE: 7
PAGES: 1601-1610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE: Molecular cloning and in vitro expression of a cDNA clone for TITLE: human cellular tumor antigen p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: MOD RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DATE: 1985-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL: Molecular and cellular biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENGTH: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                           12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18;
                                                                                                                                                                                                                                                                                                                                                 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                             1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                           PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PPLSQETFSDLWKLLPEN 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                  94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                  Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                  1.8e-07;
                                                                                                                                                                                                                                                                                                                                                                                     DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.1e-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DВ
                                                                                                               active
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 20
                                                                                                                                                                                                                                                                                                                                                                                   Length 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                             compounds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                               in cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                   0
```

```
APPLICANT: FOWLKES, Dana M.
APPLICANT: KAY, Brian K.
APPLICANT: KAY, Brian K.
APPLICANT: RELINGER, Jeffrey A.
APPLICANT: HYDE-DERUYSCHER, Robin P
TITLE OF INVENTION: IDENTIFICATION OF DRUGS
TITLE OF INVENTION: LIBRARIES
FILE REFERENCE: FOWLKES-4D
CURRENT APPLICATION NUMBER: US/10/656,250
CURRENT FILING DATE: 2003-09-08
PRIOR APPLICATION NUMBER: 09/050,359
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: OF/US97/19638
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 08/740,671
PRIOR FILING DATE: 1996-10-31
NUMBER OF SEQ ID NOS: 180
SOFTWARE: Patentin version 3.2
SEQ ID NO 48
LENGTH: 32
TYPE: PRI
TACKING APPLICATION VERSION 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-918-643-3
                                                         밁
                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-656-250-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
RESULT 11
                                                                                                                                                                                                                   ÚS-10-656-250-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 48, Application US/106 Publication No. US20050069951A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                       Matches
                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUBLICATION INFORMATION:
   AUTHORS: Harlow, E., Williamson, N.M., Ralston, R.,
   AUTHORS: Adams, T.E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 32
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DATABASE ACCESSION NUMBER: K03199 DATABASE ENTRY DATE: 1995-01-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ISSUE: 7
PAGES: 1601-1610
DATE: 1985-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE: Molecular cloning and in vitro expression TITLE: human cellular tumor antigen p53 JOURNAL: Molecular and cellular biology VOLUME: 5
                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                           ORGANISM: Artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: part of the amino acid sequence of the Human tumour supressor p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                      OTHER INFORMATION: fragment of human p53
                                                     12 PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12
                                                                                                                                       18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 PPLSQETFSDLWKLLPEN 18
                                                                                              1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/10656250
                                                                                                                                   ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94.3%; Score 99;
100.0%; Pred. No.
tive 0; Mismatc
                                                                                                                                                                            94.3%;
                                                                                                                                       0;
                                                                                                                                                          Score 99; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DRUGS USING COMPLEMENTARY COMBINATORIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 5;
                                                                                                                                                                            DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.8e-07;
                                                                                                                                                            1.8e-07
                                                                                                                                                                          Length 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of a cDNA clone for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Helfman,D.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                         0
```

US-10-450-763-33581

Sequence 33581, Application US/10450763 Publication No. US20050196754A1 GENERAL INFORMATION:

APPLICANT: Hyseq, Inc

```
; LOCATION: (7)..(281)
; OTHER INFORMATION: P53 domain identified by PFam, accession; OTHER INFORMATION: 1.4e-165, PFam score of 563.4
US-10-450-763-31871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-450-763-31871
                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 60736
SOFTWARE: CUSTOM
SEQ ID NO 31871
LENGTH: 283
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 31871, Application US/10450763 Publication No. US20050196754A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 60736
SOFTWARE: Custom
SEQ ID NO 33581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Hyseq, Inc
TITLE OF INVENTION: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
FILE REFERENCE: 790C193/US
CURRENT APPLICATION NUMBER: US/10/450,763
CURRENT FILING DATE: 2003-06-11
PRIOR APPLICATION NUMBER: PCT/US01/08631
PRIOR APPLICATION NUMBER: PCT/US01/08631
PRIOR FILING DATE: 2001-03-30
                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 09/649,167
PRIOR FILING DATE: 2000-08-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 09/540,217
PRIOR FILING DATE: 2000-03-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 09/540,217
PRIOR FILING DATE: 2000-03-31
PRIOR APPLICATION NUMBER: 09/649,167
PRIOR FILING DATE: 2000-08-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: PCT/US01/08631
PRIOR FILING DATE: 2001-03-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/450,763
CURRENT FILING DATE: 2003-06-11
                                                                                                                                                                                       LOCATION: (151)..(173)
OTHER INFORMATION: P53 TUMOUR SUPRESSOR SIGNATURE domain identified by eMATRIX,
OTHER INFORMATION: accession number PR00386B, p-value=5.950e-30, raw score of 12.28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: DOMAIN
LOCATION: (7)..(255)
OTHER INFORMATION: P53 domain identified by PFam,
OTHER INFORMATION: 5.1e-140, PFam score of 478.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: DOMAIN
LOCATION: (97)..(137)
OTHER INFORMATION: p53 tumor antigen proteins domain identified by eMATRIX,
OTHER INFORMATION: accession number BL00348B, p-value=1.000e-40, raw score
                                                                                                                                                                                                                                                                                                 ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                  NAME/KEY: DOMAIN
                                                                                                                                                                                                                                                             NAME/KEY: DOMAIN
                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OF INVENTION: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l Similarity
18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2003-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94.3%;
94.3%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 99;
Pred. No.
Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 5;
J. 1.6e-06;
O;
DB 5; I
                  Length 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                          name P53, E-value=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    name
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P53, E-value=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          score of 12.18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

```
SOFTWARE: Patentin version 3.0

SEQ ID NO 24

LENGTH: 353

TYPE: PRT

ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: UNSURE
LOCATION: (76)...(76)

OTHER INFORMATION: X = any aming
 밁
                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
US-11-236-014-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                               US-09-849-602-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-849-602-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: Homo sapiens US-11-236-014-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Scanlan, Matthew J.
APPLICANT: Old, Lloyd J.
APPLICANT: Stockert, Elisabeth
APPLICANT: Chen, Yao-Tseng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Deppert, Wolfgang W.
APPLICANT: Dornreiter, Irene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 24, Application US/11236014
Publication No. US20060062792A1
                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/11/236,014
CURRENT FILING DATE: 2005-09-27
PRIOR APPLICATION NUMBER: PCT/EP2004/003299
PRIOR FILING DATE: 2004-03-27
PRIOR APPLICATION NUMBER: EP 03007000.7
PRIOR APPLICATION NUMBER: EP 03007000.7
PRIOR FILING DATE: 2003-03-27
NUMBER OF SEQ ID NOS: 26
                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Colon Cancer Antigen | FILE REFERENCE: L0461/7105 (JRV) CURRENT APPLICATION NUMBER: US/09/849,602 CURRENT FILING DATE: 2001-05-04
                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: Novel Human p53 Splice Variant Displaying Differential TITLE OF INVENTION: Transcriptional Activity FILE REFERENCE: 4121-178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn version 3.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 32
TYPE: PRT
                                                                                Local
 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18;
                               1 PPLSQETFSDLWKLLPEN 18
                                                               18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 PPLSQETFSDLWKLLPEN 18
                                                                                Similarity
PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/09849602
To. US20030165834A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                          X = any amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94.3%; but
100.0%; Pr
                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                     Cancer Antigen Panel
                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29
                                                                              Score 99;
; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 99;
Pred. No.
                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 6; L
. 2.1e-06;
                                                                                DB 3; L
2.3e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                            Length 353;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                               Indels
                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
```

```
RESULT 15

US-10-146-473-78

JOS-10-146-473-78

Sequence 78, Application US/10146473

PUBLICANT NORMATION:

APPLICANT: Gout, Ivanible the APPLICANT: Chen, Yao-Tseng

APPLICANT: Chen, Yao
```

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
       45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq length: 0 seq length: 2000000000
                                                                                              protein search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 July 5, 2006, 22:47:41 ; Search time 20 Seconds (without alignments) 25.490 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     112942 seqs, 26832045 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-403-440A-2
105
     PPLSQETFSDLWKLLPENG
     GenCore version (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapext 0
                    US-10-538-066-367
US-11-315-777-9
US-11-319-873-9
US-11-319-873-9
US-11-009-357-6
US-11-009-357-7
US-11-0953-613C-790
US-10-953-613C-790
US-10-953-613C-791
US-10-953-613C-791
US-10-953-613C-791
US-10-953-613C-791
US-10-953-613C-791
US-10-953-613C-793
US-10-953-613C-793
US-10-953-613C-793
US-10-953-613C-781
US-10-953-613C-781
US-10-949-953-613C-781
US-10-949-953-613C-781
US-10-449-902-55791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5.1.9
Biocceleration Ltd.
Sequence 367, Applisequence 3, Applisequence 3, Applisequence 2, Applisequence 778, Applisequence 778, Applisequence 780, Applisequence 780, Applisequence 792, Applisequence 791, Applisequence 791, Applisequence 791, Applisequence 624, Applisequence 600, Applisequence 781, Applisequence 50286, Asequence 50286, Asequence 241, Applisequence 241, Applisequence 241, Applisequence 241, Applisequence 241, Applisequence 3028, Applisequence 313, Applisequence 313, Applisequence 313, Applisequence 313, Applisequence 3673, Applise
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Description
                                                                                                                                                                                                                                                                                          RESULT 2
US-11-315-777-9
                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 1
US-10-538-066-367
                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 367, A
Publication No.
                                                                                                                                                                                                                                                                                                                                                                 12
                                                                                                                                                                                                                                                                                                                                                                                                                                       18;
```

44444444444444444444444444444444444444	42.9 367 6 US 41.9 439 6 US 41.9 459 6 US 41.9 726 6 US 41.9 726 6 US 41.9 726 6 US 41.0 726 6 US 41.0 372 6 US 40.0 20.0 5312 6 US 40.0 2340 6 US 40.0 5312 6 US 40.0 5312 6 US	45	44	43	42	41	40	39	38	37	36	35	ω 4	33	32	31	30	29	28	27	ċ
367 6 US 381 6 US 39 459 6 US 39 726 6 US 372 6 6 US 372 6 US	367 6 US-10-953-349-5776 Sequence 9 381 6 US-10-953-349-5775 Sequence 9 439 6 US-10-449-902-33353 Sequence 9 459 6 US-10-449-902-42702 Sequence 9 726 6 US-10-449-902-56115 Sequence 9 726 6 US-10-449-902-56115 Sequence 9 726 6 US-10-449-902-56500 Sequence 9 726 6 US-10-449-902-56500 Sequence 9 726 6 US-10-449-902-56500 Sequence 9 726 6 US-10-49-902-56500 Sequence 10 6 US-10-23-697-2548 Sequence 11 6 US-10-23-697-2548 Sequence 12 6 US-10-953-349-18617 Sequence 13 6 US-10-953-349-20975 Sequence 14 6 US-10-953-349-20975 Sequence 15 6 US-10-953-349-20975 Sequence 16 US-10-953-349-20975 Sequence 17 18 US-10-953-349-20975 Sequence 18 18 US-10-953-349-35955 Sequence 18 18 US-10-953-349-35955 Sequence	42	42	42	42	42	42	42	42	42	42.5	43	43	44	44	44	44	44	45	45	;
	6 US-10-953-349-5776 Sequence 6 US-10-953-349-5775 Sequence 6 US-10-449-902-3353 Sequence 6 US-10-449-902-42702 Sequence 6 US-10-449-902-51153 Sequence 6 US-10-449-902-551153 Sequence 6 US-10-449-902-56105 Sequence 6 US-10-449-902-5620 Sequence 6 US-10-449-902-5630 Sequence 7 US-10-338-066-623 Sequence 8 US-10-449-902-49787 Sequence 9 US-10-293-697-2548 Sequence 9 US-10-933-066-354 Sequence 10 US-10-953-349-18617 Sequence 10 US-10-953-349-18617 Sequence 10 US-10-953-349-20975 Sequence 10 US-10-953-349-20975 Sequence 10 US-10-953-349-20974 Sequence 10 US-10-953-349-20975 Sequence 10 US-10-953-349-20973 Sequence 10 US-10-953-349-39555 Sequence 10 US-10-953-349-35955 Sequence	40.0	40.0	40.0	40.0	40.0			40.0	40.0	40.5	41.0	41.0	41.9	41.9	41.9	41.9	41.9	42.9	42.9	
	US-10-953-349-5776 US-10-953-349-5775 US-10-449-902-33353 US-10-449-902-33353 US-10-449-902-51533 US-10-449-902-51533 US-10-449-902-51533 US-10-449-902-56510 US-10-449-902-56510 US-10-449-902-56500 US-10-449-902-49787 US-10-538-066-623 US-10-449-902-49787 US-11-293-697-2548 US-11-293-697-2548 US-10-953-349-18620 US-10-953-349-18620 US-10-953-349-18620 US-10-953-349-18620 US-10-953-349-18620 US-10-953-349-18620 US-10-953-349-18620 US-10-953-349-18620 US-10-953-349-20974 US-10-953-349-35956 US-10-953-349-35956 US-10-953-349-35956 US-10-953-349-35956 US-10-953-349-35956 US-10-953-349-35956 US-10-953-349-35956	540	538	312	280	244	191	113	81	9	603	372	10	726	726	726	459	439	381	367	0
US-10-953-349-5776 US-10-449-902-42702 US-10-449-902-42702 US-10-449-902-51533 US-10-449-902-56500 US-10-449-902-56500 US-10-449-902-56500 US-10-449-902-56500 US-10-538-066-623 US-10-10-902-4918617 US-10-953-349-18617 US-10-953-349-18617 US-10-953-349-20974 US-10-953-349-20974 US-10-953-349-20973 US-10-953-349-35955	-10-953-349-5776 Sequence -10-449-902-3353 Sequence -10-449-902-42702 Sequence -10-449-902-51553 Sequence -10-449-902-51553 Sequence -10-449-902-56155 Sequence -10-449-902-5610 Sequence -10-449-902-5620 Sequence -10-38-066-623 Sequence -10-238-066-623 Sequence -10-293-697-2548 Sequence -10-953-069-1867 Sequence -10-953-349-1867 Sequence -10-953-349-20975 Sequence -10-953-349-20975 Sequence -10-953-349-20976 Sequence -10-953-349-20976 Sequence -10-953-349-20976 Sequence -10-953-349-20978 Sequence -10-953-349-20978 Sequence -10-953-349-20978 Sequence -10-953-349-20978 Sequence -10-953-349-35956 Sequence	σ	σ	თ	σ	σ	σ	σ	σ	σ	7	σ	σ	Φ	σ	σ	σ	σ	σ	σ	•
										-10-538-066-3					US-10-449-902-56115	US-10-449-902-51533	US-10-449-902-42702	US-10-449-902-33353		-10-953-349-577	

## ALIGNMENTS

```
APPLICANT: Epinmune Inc.

APPLICANT: Epinmune Inc.

TITLE OF INVENTION: HLA-A1, -A2, -A3, -A24, -B7, ITILE OF INVENTION: Peptides and Compositions FILE REFERENCE: 260.015PC06

CURRENT APPLICATION NUMBER: US/10/538,066

CURRENT FILING DATE: 2005-06-09

PRIOR APPLICATION NUMBER: US 60/432,017

PRIOR APPLICATION NUMBER: US 60/432,017

PRIOR FILING DATE: 2002-12-10

NUMBER OF SEQ ID NOS: 767

SOFTWARE: PatentIn version 3.2

SEQ ID NO 367

LENGTH: 393

TYPE: PRT

OPCANION: UTD COMPANIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: Homo sapiens US-10-538-066-367
                                                                                                                                                                                                                 Sequence 9, Application US/11315777
Publication No. US20060099187A1
GENERAL INFORMATION:
APPLICANT: Gregory, Richard J.
Wills, Ken N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                        NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS: ADDRESSEE: Townsend and STREET: Two Embarcadero CITY: San Francisco
                                                                                                                                                       Maneval, Daniel C.
TITLE OF INVENTION: Recombinant Adenoviral Vector and
Methods of Use
                                                                                                                                                                                                                                                                                                                                                                                                                                   1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
STATE: California
COUNTRY: USA
ZIP: 94111-3834
                                                                                                                                                                                                                                                                                                                                                                                                 PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/10538066 o. US20060094649A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94.3%; 50
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Score 99; DB
%; Pred. No. 2.9
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                 29
                                                                            Townsend and Crew LLP
Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 6; Lo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -B7,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -B44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Associated Antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
; TYPE: PRT; ORGANISM: Homo sapien US-11-340-715-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-11-340-715-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-11-315-777-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3, Application US/11340715 Publication No. US20060115852A1 GENERAL INFORMATION:
                                                                                       SOFTWARE: PatentIn version 3.2
SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                          APPLICANT: IKAWA, Yoji
APPLICANT: IKAWA, Shuntaro
APPLICANT: IKAWA, Shuntaro
APPLICANT: OBINATA, Masuo
TITLE OF INVENTION: HUMAN P51 GENES AND GENE PRODUCTS THEREOF
FILE REFERENCE: Q61014
CURRENT APPLICATION NUMBER: US/11/340,715
CURRENT FILING DATE: 2006-01-27
PRIOR APPLICATION NUMBER: US/09/670,568
PRIOR APPLICATION NUMBER: US/09/670,568
                                                                                                                                                       PRIOR APPLICATION NUMBER: JP 10-100467
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: PCT/JP99/01512
PRIOR FILING DATE: 1999-03-24
                                                                                                                                        NUMBER OF SEQ ID NOS: 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 9: SEQUENCE CHARACTERISTICS:
                                                                    LENGTH: 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/09/860,286
FILING DATE: 18-May-2001
APPLICATION NUMBER: US/08/328,673
FILING DATE: 25-OCT-1994
APPLICATION NUMBER: US 08/142,669
FILING DATE: 25-OCT-1993
APPLICATION NUMBER: US 08/233,669
FILING DATE: 26-APR-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: 1..393
OTHER INFORMATION: /note= "human p53"
SEQUENCE DESCRIPTION: SEQ ID NO: 9:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/11/315,777
FILING DATE: 21-Dec-2005
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Smith, Timothy S.
REGISTRATION NUMBER: 35,367
REFERENCE DOCKET NUMBER: 016930-000920US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12 PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 393 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (415) 576-0300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94.3%; Score 99; DB 7; I
100.0%; Pred. No. 2.9e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; TYPE: PRT ; ORGANISM: Homo sapiens US-11-009-357-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-11-319-873-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-11-009-357-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 10

SOFTWARE: PatentIn version 3.3
SEQ ID NO 6
LENGTH: 393
TYPE: PATENTIAL SEA TO SEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 6, Application US/11009357
Publication No. US20060127376A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 9, Application US/11319873
Publication No. US20060140910A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: MO11, Ute TITLE OF INVENTION: Methods and Compositions for Modulating Apoptotic Pathways FILE REFERENCE: STONYB-09615
CURRENT APPLICATION NUMBER: US/11/009,357
CURRENT FILING DATE: 2004-12-10
                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION NUMBER: US/11/319,873

FILING DATE: 27-Dec-2005

CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/958,570

FILING DATE: 28-OCt-1997

APPLICATION NUMBER: US/08/328,673

FILING DATE: 25-OCt-1994

APPLICATION NUMBER: US 08/142,669

FILING DATE: 25-OCT-1993

APPLICATION NUMBER: US 08/233,669

FILING DATE: 26-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS: 9
ADDRESSE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Maneyal, Daniel C.
TITLE OF INVENTION: Recombinant Adenoviral Vector
Methods of Use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Gregory, Richard J. Wills, Ken N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12 PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12 PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94.3%; Score 99;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  i DB 7; L., io. 2.9e-07; 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 7; I
2.9e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 393,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
RESULT 7
US-10-953-613C-778
                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: Homo sapiens US-11-009-357-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Moll, Ute
APPLICANT: Moll, Ute
TITLE OF INVENTION: Methods and Compositions for Modulating Apoptotic Pathways
FILE REFERENCE: STONYB-095015
CURRENT APPLICATION NUMBER: US/11/009,357
CURRENT FILING DATE: 2004-12-10
NUMBER OF SEQ ID NOS: 10
SOFTWARE: PatentIn version 3.3
SEQ ID NO 2
APPLICANT: Huang, Chichi; Heavner, George; Knight, David; Ghrayeb, John; Scallon; APPLICANT: Bernard; Nesspor; Thomas
TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES
FILE REFERENCE: CEN5038 NP
CURRENT PAPLICATION NUMBER: US/10/953,613C
CURRENT FILING DATE: 2004-09-29
PRIOR APPLICATION NUMBER: 60/507,231
PRIOR APPLICATION NUMBER: 60/507,231
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 1021
SOFTWARE: Patentin Ver 3.0
SEQ ID NO 778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2, Application US/11009357
Publication No. US20060127376A1
GENERAL INFORMATION:
                                                                                                                                                                                                        Sequence 778, Application US/10953613C Publication No. US20060127404A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 425
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO: 9: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: /note= "human p53" SEQUENCE DESCRIPTION: SEQ ID NO: 9:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Smith, Timothy S.
REGISTRATION NUMBER: 35,367
REFERENCE/DOCKET NUMBER: 016930-000920US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200
TELEFAX: (415) 576-0300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                        12 PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: Protein LOCATION: 1.393 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS: <Unknown>
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 393 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                     94.3%; Suc
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94.3%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 99; DB; Pred. No. 2.9
                                                                                                                                                                                                                                                                                                                                                                                                                              Score 99; DB 7; L; Pred. No. 3.1e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 7; hear,
0. 2.9e-07;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 425;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                             <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

```
Ś
                                                                                           ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-953-613C-780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
US-10-953-613C-790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                               US-10-953-613C-780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-953-613C-790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-953-613C-778
                                                                                                                                                          CURRENT APPLICATION NUMBER: US/10/953,613C
CURRENT FILING DATE: 2004-09-29
PRIOR APPLICATION NUMBER: 60/507,231
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 1021
SOFTMARE: Patentin Ver 3.0
SEQ ID NO 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/507,231
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 1021
SOFTWARE: PATENTIN Ver 3.0
SEQ ID NO 790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 12; Conserv
                                                Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                           Sequence 780, Application US/10953613C Publication No. US20060127404A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 790, Applic Publication No. US20 GENERAL INFORMATION:
                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                             APPLICANT: Huang, Chichi;Heavner, George;Knight, David;Ghrayeb, John;Scallon;APPLICANT: Bernard;Nesspor; Thomas
TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES
FILE REFERENCE: CEN5038 NP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: CEN5038 NP
CURRENT APPLICATION NUMBER: US/10/953,613C
CURRENT FILING DATE: 2004-09-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Huang, Chichi;Heavner, George;Knight, David;Ghrayeb, John;Scallon;APPLICANT: Bernard;Nesspor; Thomas
TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 12
                                                                                                                                                LENGTH: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12;
5 OETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5 QETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 QETFSDLWKLLP 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 QETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             h 62.9%;
Similarity 100.0%;
                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/10953613C o. US20060127404A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62.9%; 5c.
100.0%; Pr
                                            58.1%;
91.7%;
                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 66;
Pred. No.
                                            Score 61; DB 6;
Pred. No. 0.003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 66;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 6; L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 6; L
                                                             DB 6;
                                                             Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 12;
                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

밁

QETFSDYWKLLP 12

```
RESULT 12
US-10-953-613C-791
US-10-953-613C-791
; Sequence 791, Application US/10953613C
; Publication No. US20060127404A1
; GENERAL INFORMATION:
 APPLICANT: Huang, Chichi; Heavner, George; Knight, David; Ghrayeb,
 APPLICANT: Bernard; Nesspor; Thomas
   TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHO
   FILE REFERENCE: CENSO3 NP
   CURRENT APPLICATION NUMBER: US/10/953,613C
; CURRENT FILING DATE: 2004-09-29
; CURRENT FILING DATE: 2004-09-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 10
US-10-953-613C-792
                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
US-10-953-613C-779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: Homo sapiens US-10-953-613C-779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-953-613C-792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 779, Application US/10953613C
Publication No. US20060127404A1
GENERAL INFORMATION:
APPLICANT: Huang, Chichi; Heavner, George; Knight, David; Ghrayeb, John; Scallon;
APPLICANT: Bernard; Nesspor; Thomas
TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES
FILE REFERENCE: CEN5038 NP
CURRENT APPLICATION NUMBER: US/10/953,613C
CURRENT FILING DATE: 2004-09-29
FRICE REPLICATION UNMBER: 60/507,231
PRIOR FILING DATE: 2003-09-30
PRIOR FILING DATE: 2003-09-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/953,613C CURRENT FILING DATE: 2004-09-29 PRIOR APPLICATION NUMBER: 60/507,231 PRIOR FILING DATE: 2003-09-30 NUMBER OF SEQ ID NOS: 1021 SOFTWARE: Patentin Ver 3.0 SEQ ID NO 792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 792, Application US/10953613C Publication No. US20060127404A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 1021
SOFTWARE: PatentIn Ver 3.0
SEQ ID NO 779
                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Huang, Chichi;Heavner, George;Knight, David;Ghrayeb, John;Scallon;APPLICANT: Bernard;Nesspor; Thomas
TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES
FILE REFERENCE: CEN5038 NP
PRIOR APPLICATION NUMBER: 60/507,231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11; Conservative
                                                                                                                                                                                                                                                                                                                                             v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 QETFSDYWKLLP 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 QETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                      QPTFSDLWKLLP 12
                                                                                                                                                                                                                                                                                                                             QETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                            57.1%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             58.1%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 61; DB 6;
Pred. No. 0.003;
                                                                                                                                                                                                                                                                                                                                                                                                            Score 60; DB 6;
Pred. No. 0.0042;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                                                                                              Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 12
                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                     METHODS AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                              John;Scallon;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
US-10-538-066-600
Sequence 600, Application
Publication No. US2006009
GENERAL INFORMATION:
APPLICANT: Epimmune Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-953-613C-791
                                                                                                                                            ; ORGANISM: Homo sapiens US-10-538-066-600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-538-066-624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-538-066-624
                                                                                                                                                                                                       TITLE OF INVENTION: HLA-A1, -A2, -A3, -A24, -B7, and -B44 Tumor Associated Antigen TITLE OF INVENTION: Peptides and Compositions FILE REFERENCE: 2060.015PC06 CURRENT APPLICATION NUMBER: US/10/538,066 CURRENT FILING DATE: 2005-06-09 PRIOR APPLICATION NUMBER: US 60/432,017 PRIOR APPLICATION NUMBER: US 60/432,017 ON TYPE: PRIOR FILING DATE: 2005-06-09 PRIOR FILING DA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn version 3.2
SEQ ID NO 624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 624, Application US/10538066
Publication No. US20060094649A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 1021
SOFTWARE: PatentIn Ver 3.0
SEQ ID NO 791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Epimmune Inc.
TITLE OF INVENTION: HLA-A1, -A2, -A3, -A24, -B7, and -B44 Tumor Associated Antigen
TITLE OF INVENTION: Peptides and Compositions
FILE REFERENCE: 2060.015PC06
CURRENT APPLICATION NUMBER: US/10/538,066
CURRENT FILING DATE: 2005-06-09
PRIOR APPLICATION NUMBER: US 60/432,017
PRIOR FILING DATE: 2002-12-10
Query Match
Best Local Similarity
Matches 10; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 12
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match 56.2%; Score 59; DB 6; Local Similarity 100.0%; Pred. No. 0.0054;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 QETFSDLWKLL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5 QETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QPTFSDLWKLLP 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QETFSDLWKLL 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/10538066
52.4%; Score 55; DB 6; ilarity 100.0%; Pred. No. 0.019; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US20060094649A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     57.1%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 60; DB 6;
Pred. No. 0.0042;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 12;
                                                                         Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
           ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
RESULT 15

US-10-953-613C-781

US-10-953-613C-781

Sequence 781, Application US/10953613C

Publication No. US20060127404A1

GENERAL INFORMATION:

APPLICANT: Huang, Chichi, Heavner, George; Knight, David; Ghrayeb, John; Scallon; APPLICANT: Bernard; Nesspor; Thomas

TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES FILE REFERENCE: CENSO38 NP

CURRENT APPLICATION NUMBER: US/10/953,613C

CURRENT FILING DATE: 2004-09-29

PRIOR APPLICATION NUMBER: 60/507,231

PRIOR FILING DATE: 2003-09-30

NUMBER OF SEQ ID NOS: 1021

SOFTWARE: Patentin Ver 3.0

SEQ ID NO 781

LENGTH: 12

TYPE: PRT

ORGANISM: Homo sapiens
Search completed: July 5, 2006, 22:51:02 Job time : 20 secs
                                                                                         망
                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                            Query Match 52.4%; Score 55; DB 6; Length 12; Best Local Similarity 83.3%; Pred. No. 0.023; Matches 10; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5 QETFSDLWKL 14
|||||||||
1 QETFSDLWKL 10
                                                                                     5 QETFSDLWKLLP 16
| ||| |||||
1 QPTFSDYWKLLP 12
                                                                                                                                                                              0;
                                                                                                                                                                          Gaps
                                                                                                                                                                              0
```

v.

## THIS PAGE LEFT BLANK

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein - protein search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
  100
111
111
112
113
113
114
115
117
117
118
118
119
119
123
123
123
123
124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq length: 0
seq length: 2000000000
  Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   July 5, 2006, 22:46:01 ; Search time 50 Seconds (without alignments) 33.262 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IBSUED PATENTS AA:*

| PMC Celerra SIDS3/ptodata/2/iaa/5 COMB.pep:*
| EMC Celerra SIDS3/ptodata/2/iaa/6 COMB.pep:*
| EMC Celerra SIDS3/ptodata/2/iaa/7 COMB.pep:*
| EMC Celerra SIDS3/ptodata/2/iaa/H COMB.pep:*
| EMC Celerra SIDS3/ptodata/2/iaa/H COMB.pep:*
| EMC Celerra SIDS3/ptodata/2/iaa/RE COMB.pep:*
| EMC Celerra SIDS3/ptodata/2/iaa/RE COMB.pep:*
| EMC Celerra SIDS3/ptodata/2/iaa/RE COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 PPLSQETFSDLWKLLPENG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 650591 seqs, 87530628 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-403-440A-2
Maximum Match 100%
Listing first 45 su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.9
Copyright (c) 1993 - 2006 Biocceleration Ltd.
DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gapext 0
            US-09-081-975-8
US-09-081-975-10
US-09-081-975-16
US-09-081-975-16
US-09-081-975-16
US-09-081-975-16
US-09-089-1437-48
US-09-958-1438-3
US-08-390-4798-1
US-08-390-4798-1
US-08-390-5178-1
US-09-607-221-21
US-08-697-221-21
US-08-697-221-21
US-08-697-221-21
US-08-697-221-21
US-08-697-221-21
US-08-697-221-21
US-08-697-221-21
US-08-697-221-23
US-08-697-221-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                        Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                              Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                Sequence
Sequence
Sequence
Sequence
                                                                                                          Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                            Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                              8 8, Appli
10, Appli
11, Appli
3, Appli
3, Appli
1, Appli
24, Appli
1, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-081-975-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 8, Application US/09081975 Patent No. 6451979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
```

45	44	43	42	41	40	39	38	37	36	ω 5	34	33	32	31	30	29	28	27
99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3
393	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393
ب	_	_	_	_	_	_	_	٢	μ	_	-	_	<u>, , , , , , , , , , , , , , , , , , , </u>	μ	Н	_	۲	_
US-08-697-221-11	US-08-697-221-4	US-08-697-221-3	US-08-697-221-2	US-08-795-006A-32	US-08-390-515A-9	US-08-390-515A-8	US-08-390-515A-7	US-08-390-515A-6	US-08-431-357-2	US-08-390-516C-9	US-08-390-516C-8	US-08-390-516C-7	US-08-390-516C-6	US-08-347-792-2	US-08-047-041A-28	US-08-047-041A-27	US-08-047-041A-26	US-08-047-041A-25
Sequence 11, Appl	Sequence 4, Appli	Sequence 3, Appli	Sequence 2, Appli	Sequence 32, Appl	Sequence 9, Appli	Sequence 8, Appli	Sequence 7, Appli	Sequence 6, Appli	Sequence 2, Appli	Sequence 9, Appli	Sequence 8, Appli	Sequence 7, Appli	Sequence 6, Appli	Sequence 2, Appli	Sequence 28, Appl	Sequence 27, Appl	Sequence 26, Appl	Sequence 25, Appl

## ALIGNMENTS

```
US-09-081-975-8
  Query Match 94.3
Best Local Similarity 100
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows
SOFTWARE: FESSEG for Windows Version 2.0b
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/081,975
FILING DATE: 12-MAY-1998
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/046,207
FILING DATE: 12-MAY-1997
ATTORNEY/AGENT INFORMATION:
APPLICATION SOFT APPLICATION OPERATION: 10-MAY-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 20 amino acids
                                                                                                                                                                                                                                                                    NAME: Eisenstein, Ronald I
REGISTRATION NUMBER: 30,628
REFERENCE/DOCKET NUMBER: 47400
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-345-6054
TELEFAX: 617-345-1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Kaelin, William
APPLICANT: Jost, Christine
TITLE OF INVENTION: METHODS OF TREATMENT USING
TITLE OF INVENTION: NBS-1, ANTIBODIES AND PROTEINS THERETO, AND USES OF THE
TITLE OF INVENTION: ANTIBODIES
NUMBER OF SEQUENCES: 27
CORRESPONDENCE ADDRESS:
ADDRESSEE: Nixon Peabody LLP
STREET: 101 Federal Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 101 F
CITY: Boston
STATE: MA
                                                                                                               STRANDEDNESS: si
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: U
                                                                                                                                                                                                                                                    TELEX:
                                                                                                                                                         amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Diskette
                                                                                                                                    single
94.3%; Score 99; DB 2; L
100.0%; Pred. No. 4.3e-09;
/ative 0; Mismatches 0;
                                                                                                                                                                                                                             8:
                                              Length 20;
    Indels
    <u>..</u>
    Gaps
  0;
```

```
멍
                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                           US-09-081-975-11
                                                                                                                                                                                                                                RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-081-975-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 2
US-09-081-975-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 18
Sequence 11, Application US/09081975
Patent No. 6451979
GENERAL INFORMATION:
APPLICANT: Kaelin, William
APPLICANT: Jost, Christine
TITLE OF INVENTION: METHODS OF TREATMENT USING
TITLE OF INVENTION: MBS-1, ANTIBODIES AND PROTBINS THERETO, AND USES
TITLE OF INVENTION: ANTIBODIES
NUMBER OF SEQUENCES: 27
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/046,207
FILING DATE: 12-MAY-1997
ATTORNEY/AGENT INFORMATION:
NAME: Eisenstein, Ronald I
REGISTRATION NUMBER: 30,628
REFERENCE/DOCKET NUMBER: 47400
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617,345-6654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Kaelin, William
APPLICANT: Kaelin, William
APPLICANT: Jost, Christine
TITLE OF INVENTION: METHODS OF TREATMENT USING
TITLE OF INVENTION: NBS-1, ANTIBODIES AND PROTEINS THERETO, AND USES OF THE
TITLE OF INVENTION: ANTIBODIES
NUMBER OF SEQUENCES: 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows
SOFTWARE: FastSEQ for Windows Version 2.0b
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/081,975
FILLING DATE: 12-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: MA
COUNTRY: US
ZIP: 02110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 20 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 101 F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 617-345-1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                             1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0, Application US/09081975
6451979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                          PPLSQETFSDLWKLLPEN 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPLSQETFSDLWKLLPEN 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101 Federal Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nixon Peabody LLP
                                                                                                                                                                                                                                                                                                                                                                                      94.3%; Score 99; DB 2; L
100.0%; Pred. No. 4.3e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10:
                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                         Length 20;
                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                   ΟĘ
                                                                                                                                                                                                                                                                                                                                                                    0
                                                                   THE
```

```
RESULT 4
US-09-081-975-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-081-975-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 16, Application US/09081975 Patent No. 6451979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows
SOFTWARE: FastSEQ for Windows Versic
SOFTWARE: FastSEQ for Windows Versic
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/081,975
FILING DATE: 12-MAY-1998
CLASSIFICATION 13-5
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/046,207
FILING DATA: 13-MAY-1997
FILING DATA: 13-MAY-1997
                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Kaelin, William
APPLICANT: Jost, Christine
APPLICANT: Jost, Christine
TITLE OF INVENTION: METHODS OF TREATMENT USING
TITLE OF INVENTION: NBS-1, ANTIBODIES AND PROTI
TITLE OF INVENTION: ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows
SOFTWARE: FESTISEE for Windows Version 2.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/081,975
FILING DATE: 12-MAY-1998
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/046,207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 20 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 02110
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION: TELEPHONE: 617-345-6054
TELEFAX: 617-345-1300
                                                                                                                                                                                                                                                                                            CITY: Boston
STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Eisenstein, Ronald I
REGISTRATION NUMBER: 30,621
REFERENCE/DOCKET NUMBER: 4'
                                                                                                                                                                                                                                                       ZIP: 02110
                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                            STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match 94.3%; Score 99; DB 2; L
Local Similarity 100.0%; Pred. No. 4.3e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: U
ZIP: 02110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 101 |
CITY: Boston
                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Nixon Peabody LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MA
                                                                                                                                                                                                                                                                                                                                          E: Nixon Peabody LLP
101 Federal Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     101 Federal Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30,628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        47400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                           Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.0b
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROTEINS THERETO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                        AND USES OF THE
```

ATTORNEY/AGENT INFORMATION:

Ronald

```
RESULT 5
US-09-069-827A-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-081-975-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 48, Application US/09069827A Patent No. 6617114 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 20 amino acids
                                                                TELEFAX: (202) 737-31
INFORMATION FOR SEQ ID NO: 48:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: 617-345-6054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
STRANDEDNESS: sir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/069,827A

FILING DATE: 30-Apr-1998
                                                                                                                     NAME: COOPER, IVer P
REGISTRATION NUMBER: 28,005
REFERENCE/DOCKET NUMBER: FOWLKES=4C
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-5197
                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 178 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FRELINGER, Jeffrey A
HYDE-DERUYSCHER, RODIN P
TITLE OF INVENTION: IDENTIFICATION OF DRUGS USING
COMPLEMENTARY COMBINATORIAL LIBRARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: FOWLKES, Dana M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                APPLICATION NUMBER: US 09/050,359
FILING DATE: 31-MAR-1998
APPLICATION NUMBER: PCT/US97/19638
FILING DATE: 31-OCT-1997
APPLICATION NUMBER: US 08/740,671
FILING DATE: 31-OCT-1996
                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: BROWDY AND NEIMARK, P.L.L.C. STREET: 624 Ninth Street N.W., Suite 300
                                LENGTH: 32 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Washington
STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPLSQETFSDLWKLLPEN 19
                                                                                         20 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  617-345-1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KAY, Brian K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30,628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        47400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 99, DB 2; L; Pred. No. 4.3e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۰,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
```

```
NUMBER OF SEQ ID NOS: 44
SOFTWARE: PatentIn version 3.2
SEQ ID NO 3
LENGTH: 32
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                            RESULT 7
US-08-245-500A-1
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; MOLECULE TYPE: peptide
; SEQUENCE DESCRIPTION: SEQ ID NO:
US-09-069-827A-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-958-163A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-958-163A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: BURRELL
APPLICANT: HILL, D
APPLICANT: KINCLER
APPLICANT: VOGELST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Sergeev, Pavel
TITLE OF INVENTION: Synthesis of biologically active compounds in cells
FILE REFERENCE: sergeev
                                                                                                                                                                                                                                          Sequence 1, Application US/08245500A Patent No. 5550023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 3, Application US/09958163A Patent No. 6831071
                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
OTHER INFORMATION: part of the amino acid sequence of the Human tumour supressor p5
PUBLICATION INFORMATION:
AUTHORS: Harlow, E., Williamson, N.M., Ralston, R., Helfman, D.M. and
AUTHORS: Adams, T.E.
TITLE: Molecular cloning and in vitro expression of a cDNA clone for
TITLE: Muman cellular tumor antigen p53
JOURNAL: Molecular and cellular biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT FILING DATE: 2001-10-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DATE: 1985-07-01
DATABASE ACCESSION NUMBER: K03199
DATABASE ENTRY DATE: 1995-01-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ISSUE: 7
PAGES: 1601-1610
                                                                               TITLE OF INVENTION: AMPLIFICATION TITLE OF INVENTION: HUMAN TUMORS NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
STATE: D.C.
COUNTRY: USA
                                STREET: 1001 G STREET: WASHINGTON
                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                   18;
                                                                                                                                                                                                                                                                                                                                               12 PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12 PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                     1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            l Similarity
18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                  E: BANNER, BIRCH, MCKIE AND BECKETT 1001 G STREET, N.W.
                                                                                                                                                      VOGELSTEIN, BERT
                                                                                                                                                                                         HILL, DAVID E.
                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94.3%; Sillarity 100.0%; Conservative 0;
                                                                                                                                                                                                           BURRELL, MARILEE
                                                                                                                                      AMPLIFICATION OF HUMAN MDM2 GENE IN
                                                                                                                                                                                                                                                                                                                                                                                                                                      94.3%; Score 99;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                    <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 99; DB 2; L; Pred. No. 7.1e-09; 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                      7.1e-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
US-08-390-546-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-245-500A-1
                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: BURRELL
APPLICANT: HILL, D
APPLICANT: KINZLER
APPLICANT: VOGELST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 64 amino
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1,
Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IER Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: KAGAN, SARAH A.
REGISTRATION NUMBER: 32,141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/245,500A
FILING DATE: 07-APR-1993
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                       APPLICANT: KINZÍER, KENNETH W.
APPLICANT: VOGELSTEIN, BERT
TITLE OF INVENTION: AMPLIFICATION OF HUMAN MDM2 GENE IN
TITLE OF INVENTION: HUMAN TUMORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 01
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-508-9100
ATTORNEY/AGENT INFORMATION:
NAME: KAGAN, SARAH A.
REGISTRATION NUMBER: 32,
                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: lir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                             APPLICATION NUMBER: US/0 FILING DATE: 07-APR-1993 CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 64 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: 202-508-9299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                          CITY: WASHINGTON
                                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12 PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                              20001
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/08390546
                                                                                                                                                                                                                         D.C.
                                                                                                                                                                                                                                                     E: BANNER, BIRCH, MCKIE AND BECKETT 1001 G STREET, N.W.
                                                                                                                                                                                                                                                                                                                                                                                    HILL, DAVID E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                      BURRELL, MARILEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             : protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94.3%; 52.
100.0%; Pred. No.
                                                                           US/08/390,546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01107.42798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.5e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-390-479A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-390-546-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/08390479A
Patent No. 5618921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: protein
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX: 197430 BBMB UT INFORMATION FOR SEQ ID NO:
                                                                                 TELEX: 197430 BBMB UT INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/390,479A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17q
                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: KACAN, SARAH A.
REGISTRATION NUMBER: 32,141
REFERENCE/DOCKET NUMBER: 01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: KINZLER, KENNETH W.
APPLICANT: VOGELSTEIN, BERT
TITLE OF INVENTION: AMPLIFICATION OF HUMAN MDM2 GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: BANNER & WITCOFF, LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: AMPLIFICATION TITLE OF INVENTION: HUMAN TUMORS
                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 1001 G ST
CITY: WASHINGTON
STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER:
                                                                                                                                    TELEPHONE: 202-508-91
TELEFAX: 202-508-9299
                                                                                                                                                                                                                                                             FILING DATE: 02
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 64 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: 202-508-91
TELEFAX: 202-508-9299
                                                LENGTH: 64 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX:
                  TOPOLOGY: lir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12 PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                  20001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 100.0%; I
18; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1001 G STREET, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       202-508-9100
                  .inear
                                                                                                                                                        202-508-9100
                           single
protein
                                                                                                                                                                                                                                                                             02-FEB-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DAVID E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 99;
; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01107.42798
                                                                                                                                                                                          01107.48992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
```

0,

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-390-479A-1
                                                                                                                                                                                                                                                                                                                             IELEX: 197430 BBMB UT
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 64 amin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08/245,500
FILING DATE: 18-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: KAGAN, SARAH A.
REGISTRATION NUMBER: 32,141
REFERENCE/DOCKET NUMBER: 01107.4279.
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-508-9100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No. 5702903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -08-557-393-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: BURREI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIF: 2000-
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC-DOS/MS-DOS
                                                               FRAGMENT TYPE: N-terminal ORIGINAL SOURCE: ORGANISM: Homo sapiens
                                                                                                                                                      MOLECULE NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Homo sapiens POSITION IN GENOME: CHROMOSOME/SEGMENT: 17q
                                    POSITION IN GENOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FRAGMENT TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HYPOTHETICAL: NAME OF THE PROPERTY OF THE PROP
                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: AMPLIFICATION TITLE OF INVENTION: HUMAN TUMORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 202-508-9299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/557,393 FILING DATE: 13-NOV-1995
                                                                                                                                                                                                                                                          STRANDEDNESS:
TOPOLOGY: lir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
CHROMOSOME/SEGMENT: 17q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                               1: 64 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/08557393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: BANNER, BIRCH, MCKIE AND BECKETT 1001 G STREET, N.W.
                                                                                                                                                                                                                                   single
linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KINZLER, KENNETH W. VOGELSTEIN, BERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BURRELL, MARILEE HILL, DAVID E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-terminal
                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AMPLIFICATION OF HUMAN MDM2 GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 99;
; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01107.42798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.5e-08;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                            US-08-390-516C-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-390-516C-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/08390516C Patent No. 5708136
                                                      Matches
                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                            TELEX: 197430 BBMB UT INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: KAGAN, SARAH A.
REGISTRATION NUMBER: 32,141
REFERENCE/DOCKET NUMBER: 011
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-508-9100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION: APPLICANT: BURREL
                                                                                                                                                                                         TOPULOGIA TYPE: p: MOLECULE TYPE: p: HYPOTHETICAL: NO
                                                                                                                                     ORGANISM: Homo s
POSITION IN GENOME:
                                                                                                                                                                 FRAGMENT TYPE: 1
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: AMPLIFICATION TITLE OF INVENTION: HUMAN TUMORS NUMBER OF SEQUENCES: 9
                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 07-APCLASSIFICATION: 53
                                                                                                                                                                                                                                                  LENGTH: 64 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                     TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                        CHROMOSOME/SEGMENT: 17q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                    18;
12 PPLSOETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12 PPLSQETFSDLWKLLPEN 29
                      1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1001 G STREET, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HILL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VOGELSTEIN, BERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                        : protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BANNER, BIRCH, MCKIE AND BECKETT
                                                                                                                                                                               N-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DAVID E.
                                               94.3%; 500
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94.3%; but
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AMPLIFICATION OF HUMAN MDM2 GENE IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MARILEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/390,516C
                                                                                                                                                                                                                                                                                                                                                                                              32,141
                                                                                                                                                                                                                                                                                                             <u>..</u>
                                                                  Score 99; DB 1; I; Pred. No. 1.5e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 99; DB 1;
; Pred. No. 1.5e-0
                                                                                                                                                                                                                                                                                                                                                                                 01107.42798
                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.5e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 64;
                                                                              Length 64;
                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

RESULT 12 US-08-390-517A-1

; Sequence 1, Application US/08390517A

Patent No. 5736338

```
B
                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                      US-08-390-515A-1
                                                                                                                                                                                                                                                       RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-390-517A-1
                                                                                                                                                                                              Sequence 1, Application US/08390515A Patent No. 5756455
                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: BURREL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEX: 197430 BBMB UT INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: protein
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Homo sapiens
POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                  APPLICANT: HILL, DAVID E.
APPLICANT: KINZLER, KENNETH W.
APPLICANT: VOGELSTEIN, BERT
TITLE OF INVENTION: AMPLIFICATION OF HUMAN MDM2 GENE
TITLE OF INVENTION: HUMAN TUMORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: AMPLIFICATION OF HUMAN MDM2 GENE TITLE OF INVENTION: HUMAN TUMORS
CORRESPONDENCE ADDRESS:
ADDRESSEE: BANNER, BIRCH, MCKIE AND BECKETT STREET: 1001 G STREET, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: KAGAN, SARAH A.
REGISTRATION NUMBER: 32,141
REFERENCE/DOCKET NUMBER: 01:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: KINZLER, KENNETH W. APPLICANT: VOGELSTEIN, BERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS
                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION: TELEPHONE: 202-508-9100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: BANNER, BIRCH, MCKIE AND BECKETT STREET: 1001 G STREET, N.W.
CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 64 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/390,517A FILING DATE: 07-APR-1993 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                                                                                                                                                                                                                                                                            12 PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                                                                                   18;
                                                                                                                                                                                                                                                                                                                                1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       202-508-9299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BURRELL, MARILEE
                                                                                                                                                              BURRELL, MARILEE
                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DAVID E.
                                                                                                                                                                                                                                                                                                                                                                           100.0%; **
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01107.42798
                                                                                                                                                                                                                                                                                                                                                                                                    Score 99; DB 1; Pred. No. 1.5e-
                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                 1.5e-08;
thes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                   Length 64;
                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ħ
                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                   0,
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                          Patent No. 5858976
GENERAL INFORMATION:
APPLICANT: BURRELL
APPLICANT: HILL, D
APPLICANT: KINGLER
APPLICANT: KINGLER
                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-801-718-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-390-515A-1
                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
          COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Vei

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/801,718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX: 197430 BBMB UT
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 64 amino acide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOETWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/390,515A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
COMPUTER: IBM PC com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo & POSITION IN GENOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FRAGMENT TYPE: N-terminal ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER: 32,141
REFERENCE/DOCKET NUMBER: 011
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-508-9100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: KAGAN, SARAH A.
                                                                                                                                                                                                                                                       TITLE OF INVENTION: AMPLIFICATION TITLE OF INVENTION: HUMAN TUMORS NUMBER OF SEQUENCES: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HYPOTHETICAL: NO ANTI-SENSE: NO
                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: D
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 64 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 07
CLASSIFICATION:
                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: 202-508-91
TELEFAX: 202-508-9299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: WASHINGTON
                                                                                                                                    COUNTRY: USA
ZIP: 20001
                                                                                                                                                                     STATE: D.C.
                                                                                                                                                                                         CITY:
                                                                                                                                                                                                      ADDRESSEE: BANNER, BIRCH, MCKIE AND BECKETT STREET: 1001 G STREET, N.W.
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHROMOSOME/SEGMENT: 17q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20001
                                                                                                                                                                                       WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         D.C.
Y: USA
                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/08801718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PPLSQETFSDLWKLLPEN 29
                                                                                                                                                                                                                                                                                                                             HILL, DAVID E. KINZLER, KENNE
                                                                                                                                                                                                                                                                                                               VOGELSTEIN, BERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                BURRELL, MARILEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Floppy disk
14-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein
                                                                                                                                                                                                                                                                                                                               KENNETH W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94.3%; Score 99; DB 1;
100.0%; Pred. No. 1.5e-(
cive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01107.42798
                                                                                                                                                                                                                                                                                               OF HUMAN MDM2 GENE
                                                  Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.5e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

```
RESULT 15
US-09-170-159A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-801-718-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE DOCKET NUMBER: 0110

TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-508-910

TELEPAX: 202-508-929

TELEX: 197430 BBMB UT
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 64 amino acids
TYPE: amino acid
GTP NET AMINO acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1, Application US/09170159A Patent No. 6399755
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/390,515
FILING DATE: 07-APR-1993
ATTORNEY/ACENT INFORMATION:
NAME: KAGAN, SARAH A.
REGISTRATION NUMBER: 32,141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRACMENT TYPE: Noterminal
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
POSITION IN GENOME:
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/170,159A
FILING DATE: 13-Oct-1998
CLASSIFICATION: <UNKnown>
ATTORNEY/AGENT INFORMATION:
NAME: KAGAN, SARAH A.
REGISTRATION NUMBER: 32,141
REFERENCE/DOCKET NUMBER: 01107.42798
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-508-9100
TELEPHONE: 202-508-9299
TELEX: 197430 BBMB UT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHROMOSOME/SEGMENT: 17q
                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS: 5
ADDRESSEE: BANNER, BIRCH, MCKIE AND BECKETT STREET: 1001 G STREET, N.W.
CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: BURRELL, MARILEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: AMPLIFICATION OF HUMAN MDM2 GENE IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ch 94.3%; So
l Similarity 100.0%; F
18; Conservative 0;
                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
ZIP: 20001
                                                                                                                                                                                                                                                                                                                                                                                      STATE: D.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KINZLER, KENNETH W. VOGELSTEIN, BERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DAVID E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HUMAN TUMORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01107.42798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 99; DB 1;
; Pred. No. 1.5e-0
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 1.5e-08;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

밁 á

```
밁
                          Ś
                                                                                                              POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17q
SEQUENCE DESCRIPTION: SEQ ID NO: 1:
US-09-170-159A-1
                                                       Best Local Similarity 100. Matches 18; Conservative
                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                  HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL SOURCE:
                                                                                                                                                                                                                                          TOPOLOGY: linear MOLECULE TYPE: protein
12 PPLSQETFSDLWKLLPEN
              1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                   TYPE: amino acids
                                                                                                                                                                     ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                     STRANDEDNESS: single
                                                 94.3%; Suc.
100.0%; Pr/
0;
29
                                                     Score 99; DB 2; L; Pred. No. 1.5e-08; 0; Mismatches 0;
                                                                                 DB 2; Length 64;
                                                       0,
                                                       Indels
                                                       0,
```

Gaps

0

Search completed: July 5, 2006, 22:47:26 Job time : 51 secs

# THIS PAGE LEFT BLANK

```
Minimum DB
Maximum DB
                                                                               Post-processing: Minimum Match
Maximum Match
Listing first
                                                        Database
                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                        Run on:
                                                                                                                                                                                                                                                                                                                                                                                                  OM protein -
                                                                                                                                         seq length: 0
seq length: 19
                                                                                                                                                                                                                                                                                                                                                                                               protein search, using sw
           PIR_80:*
1: pir1:*
2: pir2:*
3: pir3:*
                                                                                                                                                                                                             283416 seqs,
                                                                                                                                                                                                                                       BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                      July
                                                                                                                                                                                                                                                                                                  US-09-403-440A-2
105
                                                                                                                                                                                                                                                                                  PPLSQETFSDLWKLLPENG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version 5.1.9
Copyright (c) 1993 - 2006 Biocceleration Ltd.
pir4:*
                                                                                                                                                                                                                                                                                                                                      5, 2006, 22:54:41 ; Search time 38 Seconds (without alignments) 48.108 Million cell updates/sec
                                                                                                                                                                                                              96216763 residues
                                                                                                                                                                                                                                       Gapext 0
                                                                                 0%
100%
45 St
                                                                                  summaries
                                                                                                                                                                                  3436
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

						N	. 20		20 21.5	21.	N		ผ	N	N		2	N	2		N	N	N	2	4 25	2	2	1 34	Result No. Score
0						.0	.0	20.5			۲	۲	۲	1.	Ľ	۲.	۲.	:	21.0	۳	ŗ	۳			23.8	ü.	4.	2	Query Match
1	11	10	10	10	8	00	8	18	15	14	17	16	14	13	13	13	13	8	ر ت	15	9	80	11	10	15	14	18	19	Length I
								2 14																		Ρ	ΑS	2 B6	DB ID
ALVE	3098	S53789	9138	1416	B49823	8996	4960	I40062	1788	PH1625	S59481	JH0517	B44854	S32475	S32474	S32472	2471	\$16324	S70615	S20410	A24244	S11545	S41747	A31571	0110	10	93		
DOT 1 - D - D - D - D - D - D - D - D - D -	214K exoantigen	neuropeptide	hypertrehalosemic	hypertrehalosemic	adipokinetic	hypertrehalosemi	neuropeptide Led-	shikimate 5-dehyd	cell rece	Ig H chain V-D-J		insulin-like growt	L-2,4-diaminobutyr	lymnaDFamide 5		lymnaDFamide 2		eti	endo-1,4-beta-	8		adipokinetic hormo	chaperonin 10	hypertrehalosemic	æ	othetic	_	nome polyp	Description

<b>4</b> 5	44	43	42	41	40	39	38	37	36	ა 5	34	J J	32	31	30
20	20	20	20	20.5	20.5	20.5	21	21	21	21	21	21	21	21	21
19.0	19.0	19.0	19.0	19.5	19.5	19.5	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
80	æ	æ	œ	18	14	13	19	18	17	16	15	15	13	13	13
N	ผ	Ŋ	N	N	N	N	N	N	N	N	N	N	N	N	N
A49823	S08995	A44960	A33995	I52623	PH1627	PC4391	I49037	A35704	S15754	E58503	A35389	A45103	B56864	B35245	A35245
adipokinetic hormo	hypertrehalosemic	neuropeptide Led-C	adipokinetic hormo	hypothetical prote	Ig H chain V-D-J r	cysteine proteinas	TcR delta chain V-	cytochrome P450 ol	actin 6 - soybean	superoxide dismuta	urease (EC 3.5.1.5	7 alpha-hydroxy-4-	dipeptidyl-peptida	histone Hl.c - mou	histone Hla - mous

### ALIGNMENTS

genome polyprotein (clone L3/S2) - Skalica virus (fragment)
C;Species: Skalica virus
C;Species: Skalica virus
C;Abte: 19-Mar-1997 #sequence\_revision 19-Dec-1997 #text\_change 31-Dec-2004
C;Accession: B61409
R;Guirakhoo, F.; Heinz, F.X.; Mandl, C.W.; Holzmann, H.; Kunz, C.; Gresikova, M.
J. Gen. Virol. 72, 333-338, 1991
A;Title: The relationship between the flaviviruses Skalica and Langat as revealed by A;Reference number: A61409; MUID:91132129; PMID:1847173
A;Accession: B61409
A;Residues: preliminary; not compared with conceptual translation
A;Residues: 1-19\_GUI's
A;Cross-references: UNIPROT:Q7LZY3; UNIPARC:UPI0000174A0E
C;Superfamily: hepatitis C virus genome polyprotein

a

В 2

Length 19;

```
R;Moneo, I. submitted to the Protein Sequence Database, September 2001 about ted to the Protein and Characterization of a major allergen of the pine procession, Pesceription: Isolation and Characterization of a major allergen of the pine procession, R;Reference number: A59396 A;Accession: A59396
                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 2
A59396
                                                                                                                                                                                                                                                                                                                          Tha p 1 - Thaumetopoea pityocampa (fragment)

C;Species: Thaumetopoea pityocampa

C;Date: 03-Jun-2002 #sequence_revision 03-Jun-2002 #text_change 09-Jul-2004

C;Date: A59396
밁
                               S
                                                                                                                                                                                      A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-18 <MON>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                       A;Note:
                                                                                                                                ;Cross-references: UNIPROT:Q7M4K8; UNIPARC:UPI000017CD37;Experimental source: L5;Note: IgE-binding protein, major allergen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 32.4%;
Best Local Similarity 41.7%;
Matches 5; Conservative
                                                                                  Query Match
Best Local Similarity
                                                                     Matches
2 ETYSDKYDTIDVN 14
                                  6 ETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 PPVTYRTGTDCW 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 PPLSQETFSDLW 12
                                                                   .
••
                                                                 Conservative
                                                                                  24.8%;
                                                                 Score 26; DB
Pred. No. 1.3e
3; Mismatches
                                                                 ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 34; DB
Pred. No. 84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                            ) DB 2; Lc..
1.3e+03;
5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.
                                                                                                  Length 18;
                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
C;Accession: A31571
R;Jaffe, H.; Raina, A.K.; Riley, C.T.; Fraser, B.A.; Bird, T.G.; Tseng, C.M.; Zhang, Y.S Biochem. Biophys. Res. Commun. 155, 344-350, 1988
A;Title: Isolation and primary structure of a neuropeptide hormone from Heliothis zea wi A;Reference number: A31571; MUID:88326324; PMID:3415690
A;Reference number: A31571; MUID:88326324; PMID:3415690
A;Residues: A1571
A;Rolecule type: protein
A;Residues: 1-10 dAFs
A;Cross-references: UNITROT:P16353; UNIPARC:UPI000012CDC5
C;Superfamily: adipokinetic hormone
C;Reywords: amidated carboxyl end; corpora cardiaca; hormone; neuropeptide; pyroglutamic
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F;10/Modified site: amidated carboxyl end (Asn) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Saville, B.J.; Collins, R.A.
Cell 61, 685-696, 1990
A;Title: A site-specific self-cleavage reaction performed by a novel A;Reference number: A35105; MUID:90263093; PMID:2160856
A;Accession: A35105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Kamo, M.; Kawakami, T.;
submitted to JIPID, March
A;Reference number: PA0109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   translation elongation factor eEF-1 beta' chain - Arabidopsis thaliana (fragment) (;Species: Arabidopsis thaliana (mouse-ear cress) (;Date: 07-Apr-1995 #sequence_revision 26-May-1995 #text_change 31-Dec-2004 (;Accession: PA0110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Species: mitochondrion Neurospora crassa
C;Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 07-Dec-1999
C;Accession: A35105
R;Saville, B.J.; Collins, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
PA0110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                  hypertrehalosemic/adipokinetic hormone - bollworm
N;Alternate names: Hez-HrTH
C;Species: Helicthis zea (bollworm, corn earworm, tomato fruitworm)
C;Date: 30-Jun-1989 #sequence_revision 23-Mar-1995 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: UNIPROT:Q9SCX3; UNIPARC:UPI000017B01C C;Superfamily: translation elongation factor eEF-1 beta cl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: protein
A; Residues: 1-15 < KAM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Keywords: mitochondrion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-14 <SAV>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: PA0110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Genome: mitochondrion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Cross-references: UNIPARC: UPI000017B520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary; not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hypothetical protein - Neurospora crassa mitochondrion (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                               A31571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genetic code: SGC3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SDLWKLLPENG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TESDL 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SFLWTLLQLKG 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tsugita,
1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              compared with conceptual
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 25; DB
Pred. No. 1.4e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 25; DB
Pred. No. 1.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.4e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.5e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNA in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           neurospora
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
```

```
N;Alternate names: Hez-AKH
C;Species: Heliothis zea (bollworm, corn earworm, t
C;Date: 31-Mar-1988 #sequence_revision 23-Mar-1995
C;Accession: A24244
R;Jaffe, H.; Raina, A.K.; Riley, C.T.; Fraser, B.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        adipokinetic hormone - nestling-sucking blowfly C;Species: Protophormia terraenovae (nestling-sucking blowfly) C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 09-Jul-2004 C;Accession: S11545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PEBS Lett. 339, 139-141, 1994
A;Title: Identification of a chaperonin-10 homologue in A;Reference number: S41747; MUID:94148071; PMID:7906228
A;Accession: S41747
                                                                                                                                                                                                                                                                                                                         A;Cross-references: UNIPROT:P61856; UNIPARC:UPI00001734FA
C;Superfamily: adipokinetic hormone
C;Superfamily: adipokinetic hormone
C;Keywords: amidated carboxyl end; corpora cardiaca; hormone; neuropeptide;
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F;8/Modified site: amidated carboxyl end (Trp) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Gaede, G.; Wilps, H.; Kellner, R.
Biochem. J. 269, 309-313, 1990
A;Title: Isolation and structure of a novel charged member
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: protein
A;Residues: 1-11 <BUR>
A;Cross-references: UNIPROT:Q7M1H1; UNIPARC:UPI000017B0BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Solanum tuberosum (potato)
C;Date: 19-Mar-1997 #sequence_revision 29-Aug-1997 #text_change
C;Accession: S41747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Reference number: S11545;
A; Accession: S11545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Experimental source: mitochondrion C; Keywords: mitochondrion; molecular
                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: protein
A; Residues: 1-8 <GAE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       erraenovae (Diptera)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R; Burt, W.J.E.; Leaver, C.J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 chaperonin
                                                                                         adipokinetic hormone - bollworm
                                                                                                          A24244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10 homolog - potato (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14 LLPENG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            σ
                                                                                                                                                                                                                    U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                      Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LLPEYG 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QLTFSSGW 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QETFSDLW 12
                                                                                                                                                                                 QLTFSPDW
                                                                                                                                                                                                                    QETFSDLW 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22.9%;
                                                                                                                                                                                                                                                                        21.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22.9%;
83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    molecular chaperone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MUID:90351345;
                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 24;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 24; DB 2;
Pred. No. 1.4e+03
                                                                                                                                                                                                                                                                                           Score 23;
                                                                                                                                                                                                                                                                            Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                            No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PMID:2386478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BB
                                                                                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                                                                                                                                            .8e+05
                                                         tomato fruitworm)
                                 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 10
                                                                                                                                                                                                                                                                                         Length 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-Jul-2004
                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            red-pigment-concentra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                pyroglutami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                           0,
```

B.A.; Holman, G.M.; Wagner,

R.M.;

Ridgwa

```
R;Rao, M.; Khadilkar, S.; Bandivadekar, K.R.; Deshpande, Blochem. J. 316, 771-775, 1996
A;Title: Structural environment of an essential cysteine A;Reference number: $70615; MUID:96265041; PMID:8670151
A;Accession: $70615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N;Altern
C;Specie
C;Date:
C;Access
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Biochem. Biophys. Res. Commun. 135, 622-628, 1986
A;Title: Isolation and primary structure of a peptide from the corpora cardi
A;Reference number: A24244; MUID:86186794; PMID:3964263
A;Accession: A24244
A;Molecule type: protein
A;Residues: 1-9 <UAF>
A;Cross-references: UNIPROT:P08901; UNIPARC:UPI000017661D
C;Superfamily: adipokinetic hormone
C;Keywords: amidated carboxyl end; corpora cardiaca; hormone; neuropeptide;
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F;9/Modified site: amidated carboxyl end (Gly) #status experimental
A;Cross-references: UNIPARC:UPI000017AE36
A;Experimental source: Chainia sp. strain NCL
A;Note: the source is designated as Chainia sp
C;Function:
C;Function: endohydrolyzation of beta-1,4-x
A;Pathway: fermentation of hemicellulose into
                                                                                                                                                                                                                                                           C;Species: Streptomyces sp.
A;Variety: Chainia sp. NCL 82.5.1
A;Variety: Chainia sp. NCL 82.5.1
C;Date: 19-Mar-1998 #sequence_revision
C;Accession: S70615
                                                                                                                                                                                                                                                                                                                                         endo-1,4-beta-xylanase (EC 3.2.1.8) - N;Alternate names: xylanase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Description: is responsible for the regulation of energy distribution A;Note: does not exhibit redox-controlled activation C;Keywords: chloroplast; light-harvesting complex; membrane-associated c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein kinase (EC 2.7.1.37) - spinach chloroplast N;Alternate names: LHCII protein kinase C;Species: chloroplast Spinacia oleracea (spinach) C;Date: 19-Mar-1997 #sequence_revision 11-Jun-1999
                                                                                                                     A; Molecule type: protein A; Residues: 1-5 < RAO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Accession: S20410
A;Molecule type: protein
A;Residues: 1-15 <GAL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: UNIPROT:Q9T2K8; UNIPARC:UPI00008E40E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEBS Lett. 298, 33-35, 1992
A;Title: Phosphorylation of cytochrome b6 by the LHC II
A;Reference number: S20410; MUID:92183823; PMID:1544419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Accession: S20410
                                                                                                                                                                                                                                                                                                                                                                                                      10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A.; Herrmann, R.G.; Lottspeich, F.; Ohad,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chloroplast
.on: endohydrolyzation of beta-1,4-xylosidic
fermentation of hemicellulose into ethanol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 QETFSDLW 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PDVEKSTLSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PPLSQETFSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QLTFTSSW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              spinach chloroplast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23; DB 2;
Pred. No. 3e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                              Streptomyces sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-Jun-1999
                                                                                                                                                                                                                                                                            17-Apr-1998 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . 2.8e+05;
3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
                                                                               82.5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 9;
                  linkages
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                              (Chainia sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      kinase
                                                                                                                                                                                                                                             <
                                                                                                                                                                                                   residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the corpora cardiaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    associated with
                                                                                                                                                                                                                                                                                07-May-1999
                    Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-Jul-2004
                                                                                                                                                                                                   0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                  xylans
                                                                                                                                                                                                                                                                                                                                                              NCL
                                                                                                                                                                                                 xylanase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complex;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    between
                                                                                                                                                                                                                                                                                                                                                              82.5.1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pyroglutami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                     from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            phospho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  photosy
                                                                                                                                                                                                                                                                                                                                                              (fragmen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of Heli
                                                                                                                                                                                                   Chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cyto
```

```
lymnaDFamide 1 - great pond snail
C;Species: Lymnaea stagnalis (great pond snail)
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_ch
C;Accession: 832471
R;Johnsen, A.H.; Rehfeld, J.F.
Bur. J. Biochem. 213, 875-879, 1993
B;Title: LymnaDFamides, a new family of neuropeptides from
A;Reference number: 832471; MUID:93238777; PMID:8477756
A;Accession: 832471
                                                      C.)Species: Lymnaea stagnalis (great por C.)Date: 19-Mar-1997 #sequence_revision C.)Accession: S32472
                                                                                                                            RESULT 13
S32472
R;Johnsen, A.H.; Rehfeld, J.F.
Eur. J. Biochem. 213, 875-879, 1993
Eyritle: LymnaDFamides, a new family of neuropeptides from A;Reference number: S32471; MUID:93238777; PMID:8477756
                                                                                                                                                                                                                                                                                                                   A;Experimental source: ganglia C;Keywords: amidated carboxyl end; neuropeptide F;13/Modified site: amidated carboxyl end (Phe)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Ruberti, I.; Sessa, G.; Lucchetti, S.; Morelli, G.
EMBO J. 10, 1787-1791, 1991
A;Title: A novel class of plant proteins containing a homeodomain
A;Reference number: S16323; MUID:91266907; PMID:1675603
A;Accession: S16324
                                                                                                                                                                                           밁
                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: protein A; Residues: 1-13 < JOH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hypothetical protein 2 - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 21-Nov-1993 #sequence_revision 12-May-1995 #text_change 21-Jul-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Accession: S16324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S16324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C; Keywords: glycosidase;
                                                                                                                                                                                                                                                                      Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Residues: 1-8 < RUB>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Status: translation not shown
                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cross-references: UNIPARC: UPI000011DF52; EMBL: X58821; NID: g16327;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1
                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12 WKLLP 16
                                                                                                                                                                                          v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 YKLLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 ETFSD 10
                                                                                                                                                                                                                                                       .<u>4</u>
                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
4; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                        LSQETFSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ETFXD
                                                                                                                                                                                           ISNSAFSD
                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 u
                                                                                                                                                                                                                                                                                                                                                                   UNIPROT: P80178; UNIPARC: UPI00001303C5;
                                                                                                                                                                                                                      10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hydrolase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21.0%;
                                                                                                                                                                                                                                                                      21.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21.0%;
                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 22; DB
Pred. No. 2.8e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          μ.
                                                                                                                                                                                                                                                                      Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 22;
Pred. No.
                                                                                             pond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                       Mismatches
                                                                               19-Mar-1997
                                                                                                                                                                                                                                                                                   22;
                                                                                                                                                                                                                                                                        ö.
                                                                                             snail)
                                                                                                                                                                                                                                                                      3.6e+03;
                                                                                                                                                                                                                                                                                     DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8e+05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .8e+05;
                                                                                                                                                                                                                                                                                                                   #status predicted
                                                                          #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                   Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                the
                                                                                                                                                                                                                                                                                                                                                                   PIDN: AAB26362.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                pond
                                                                                                                                                                                                                                                                                                                                                                                                                                              pond
                                                                               09-Jul-2004
                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    with a
                snail,
                                                                                                                                                                                                                                                                                                                                                                                                                                                snail, Lymnaea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIDN: CAA41624.1;
                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    closely linked
                Lymnaea
                                                                                                                                                                                                                                                                                                                                                                   PID:g299829
                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                stagı
                                                                                                                                                                                                                                                                                                                                                                                                                                                stagi
```

PI

```
C;Species: Lyr
C;Date: 19-Ma;
C;Accession:
                                                                                                                                                                                                                                                                                                                                                                                              lymnaDFamide 5 - great pond snail
C;Species: Lymnaea stagnalis (great pond snail)
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 09-Jul-2004
C;Accession: S32475
R;Johnsen, A.H.; Rehfeld, J.F.
Bur. J. Biochem. 213, 875-879, 1993
Bur. J. Biochem. 213, 875-879, family of neuropeptides from the pond snail, 1
A;Title: LymnaDFamides, a new family of neuropeptides from the pond snail, 1
A;Reference number: S32471; MUID:93238777; PMID:8477756
A;Accession: S32475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Accession: S32472
A;Molecule type: protein
A;Residues: 1-13 <JOH>
A;Cross-references: UNIPROT:P80179; UNIPARC:UPI00001303CA; PIDN:AAB26363.1; PID:g299830
A;Experimental source: ganglia
C;Keywords: amidated carboxyl end; neuropeptide
F;13/Modified site: amidated carboxyl end (Phe) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Johnsen, A.H.; Rehfeld, J.F.
Eur. J. Biochem. 213, 875-879, 1993
Eur. J. Biochem. 213, 875-879, 1993
A;Title: LymnaDFamides, a new family of neuropeptides from the pond snail, Lymnaea stagn A;Reference number: S32471; MUID:93238777; PMID:8477756
A;Accession: S32474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
S32474
                                                                                                                                                                                                                                                             A;Experimental source: ganglia C;Keywords: amidated carboxyl end; neuropeptide F;13/Modified site: amidated carboxyl end (Phe) #status predicted
                                                                                                                                                                                                                                                                                                                           A;Molecule type: protein
A;Residues: 1-13 <JOH>
A;Cross-references: UNIPROT:P80182; UNIPARC:UPI00001303D2; PIDN:AAB26366.1; PID:g299833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A,Experimental source: ganglia C;Keywords: amidated carboxyl end; neuropeptide F;13/Modified site: amidated carboxyl end (Phe) #status predicted
Search completed: July Job time : 39 secs
                                                                                       В
                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: UNIPROT:P80181; UNIPARC:UPI00001303D0; PIDN:AAB26365.1; PID:g299832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: protein A; Residues: 1-13 < JOH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              lymnaDFamide 4 -
                                                                                                                                                                          Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ymnaDFamide 4 - great pond snail
;Species: Lymnaea stagnalis (great pond snail)
;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 09-Jul-2004
;Accession: S32474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 50.0
Matches 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 LSQETFSD 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5 ISSSAFSD 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 LSQETFSD 10
                                                                                                                            3 LSQETFSD 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 ISNSAFSD 12
                                                                                                                                                                          Similarity
4; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 50.4; Conservative
                                                                                       ISSSAFSD 12
                                                                                                                                                                            Conservative
                                                                                                                                                                                            21.0%;
50.0%;
                    5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21.0%;
                    2006,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 22; DB 2;
Pred. No. 3.6e+03;
1; Mismatches 3
                       23:00:04
                                                                                                                                                                          Score 22; DB 2; 1
Pred. No. 3.6e+03;
1; Mismatches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 22; DB 2; Length 13; Pred. No. 3.6e+03; 1; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
--
                                                                                                                                                                                                                      Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                            snail, Lymnaea stagr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein - protein search, using sw model
    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                              Score
    seq length: 0 seq length: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UniProt_7.2:*
1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           July 5, 2006, 22:51:16 ; Search time 293 Seconds (without alignments) 59.984 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2849598 seqs, 925015592 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 PPLSQETFSDLWKLLPENG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-403-440A-2
    Copyright
    GenCore version 5.1.9 (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                               띪
CTTC ENTHI
CORGG SCRAR
Q6SE52 DROSI
Q9XND1 BOOMI
Q6LCZ7 HUWAN
Q5SR29 MOUSE
Q2QKW1 9HEMI
Q2QKW1 9HEMI
Q2QKW1 9HEMI
Q2QKW1 9HEMI
Q2QKW1 9HEMI
Q2QKW1 9HEMI
Q2QUKY1 9HEMI
Q2GUKY1 9HEMI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14129
                                                                                                                                                                                                                                                                                         Q9bgg8
Q6se52
Q9xnq1
Q6lcz7
Q5sr29
Q2qkw4
Q2qkw4
  982326
994727
994723
07744k8
0784645
083960
0950p3
084129
0826674
084129
072064
083965
078672
078672
0716772
0716772
0716772
0716772
                                                                                                                                                                                                                                                    Q9uel0
Q71h30
Q61d35
                                                                                                                                                                                                                                                                                                                                                                                    Q71zy3 skalica vir
P83003 entamoeba h
                                                                                                                                                                                                                                                                                                                                                                                                                            Description
             4 homo sapien
4 bos taurus
5 influenza a
6 influenza a
7 rattus norv
7 heliothis z
7 podospora c
8 mus musculu
1 solanum tub
9 lactobacill
                                                                                                                                                                                                                                                                                         7 homo sapien
9 mus musculu
4 hyadaphis t
1 hyalopterus
                                                                                                                                                                                                                                                                                                                                             sorex arane
drosophila
boophilus m
                                                                                                                                                           paracoccus
                                                                                                                                                                      neurospora
influenza a
                                                                                                                                                                                               homo sapien
thaumetopoe
                                                                                                                                                                                                                          pisum sativ
mus sp. lac
                                                                                                                                                                                                                                                     rattus norv
                                                                                                                                                                                                                                                                  andrena
                                                                                                                                                                                                                                                                               homo
                                                                                                                                                                                                                                                                sapien
ena bra
```

RESULT 2
CRTC\_ENTHI
ID CRTC\_ENTHI
AC P83003;

STANDARD;

19 AA

р Q	DR DR DR DR FT FT SQ Qu	CC CC RT TT A A R R R R R R R R R R R R R R R	RESIDENCE OF CONTROL O	
•	into into into into into into into into	NUCL MEDL Guir Gres "The reve anal J. G Copy Dist	SULT 1 1-123 99 1-123 97 1-123	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
2 1 g—g	56 1 101	NUCLEOTIDE MEDLINE-911 Guirakhoo F Gresikova M "The relati revealed by analysis."; J. Gen. Ur. Copyrighted Distributed	LT 1 73 JPHAV 77 LZY3 JPHAV 77 LZY3 JPHAV 77 LZY3, 15-DEC-2003, 15-DEC-2003, 15-DEC-2006, Genome polypop Skalica virus Viruses; ssR FlavLvirus; NCHI_TaxID=3 [1] NUCLEOTIDE SI Guirakhoo F. Gresikova M. Gresikova M. Gresikova M. Gresikova M. J. Gen. Viro. [7] Gen. Viro.	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
PLSQETFSDLW  ::      PVTYRTGTDCW	B6140 R00115 B; Fla 1496; 1 19 9 AA; larity Conser		, int, seq.,	00000000000000000000000000000000000000
DLW 12	9. 7; Flavi NS1; Viavi_NS 11 19 2273 MW 32.4% 41.7% vative	E. PubMed=1 z F.X., between onal ant onal ant creation Uniprot the Crea	IMII atec ce 1 vers (Clo (Clo rne etwo	1188888882222 2222222222222222222222222
	NS1. 1; 1. ; 34341 ; Score ; Pred; Pred;	Mandl the fl ibodie 1991). Conso	; PRT to Unip ion 1. 11. 12. L3/S2) rand vi ephalit ephalit the fla ibodies	00000000000000000000000000000000000000
	CA79E1F 34; D No. 9e smatche	W., Holiviruse peptid	ep vir	TOTAL PODCU CW3_MOUSE S10_CHICK S10_CHICK S10_FINPA OS5_91NPA OS5_91NPA OS5_9NEMI KW8_9HEMI KW8_9HEMI KW7_9HEMI KW7_9HEMI KX5_9HEMI KX5_9HEMI KX7_9HEMI KX7_9HEMI KX7_9HEMI KX1_9HEMI
	E38 CF 2; I 02; 4;	mann F Skali mappi mappi	A.  vBL.  DNA s  group.  mann H  skali  mappi	
	CC64; length 1	., Kunz .ca and L .ng and R	ge; and and	,
	8 <i>)</i> ;	C., Lang RNA	RF P	09mjq3 061c0 061s0 09ps10 09ps10 09qv6 02qv8 02qkv8 02qkw0 02qkw7 02qkw7 02qkw7 02qkw9 02qkx9 02qkx9
	; Gaps	at as sequence cot.org/t	aviviridae; C., Rangat as	podospora c mus musculu gallus gall influenza a influenza a mus sp. lac uroleucon t metopolophi uroleucon r brachycaudu macrosiphon obtusicauda nasonovia r pterocomma
	9 0;			musculu us gall uenza a uenza a sp. lac eucon t golophi eucon r hycaudu novia

```
R GO; CO: Duc.

OR GO; GO: Duc.

DR GO; GO: 0003677; F:...

DR GO; GO:0006874; P: calcı...

DR GO; GO:0006874; P: calcı...

DR GO; GO:0006611; P: protein-nuc.

DR GO; GO:0006611; P: protein-nuc.

DR GO; GO:0006355; P: regulation of r.

InterPro; IPR001580; Calret/calnex.

InterPro; IPR00086; ER target S.

DR PROSITE; PS00803; CALRETICULIN 2; PARTIAL.

DR PROSITE; PS00805; CALRETICULIN REPEAT; PARTIAL.

PROSITE; PS00801; EATARGET; PARTIAL.

PROSITE; PS00801; ER TARGET; PARTIAL.

PROSITE; PS00014; ER TARGET; PARTIAL.

PROSITE; PS00016; ER TARGET; PARTIAL.

PROSITE; PS000014; ER TARGET; PARTIAL.

PROSITE; PS000004; CALRETICULIN REPEAT; PARTIAL.

PROSITE; PS000014; ER TARGET; PARTIAL.

PROSITE; PS0000014; ER TARGET; PARTIAL.

PROSITE; PS000014; ER TARGET; PARTIAL.

PROSITE; PS0000014; ER TARGET; PARTIAL.

PROSITE; PS000014; ER TARGET; PARTIAL.

PROSITE; PS0000014; ER TARGET; PARTIAL.

PROSITE; PS0000014; ER TARGET; PARTIAL.

PROSITE; PS000014; ER TARGET; PARTIAL.

PROSITE; PS0000014; PARTIAL.

PROSITE; PS0000014; PARTIAL.

PROSITE; PS0000014; PARTIAL.

PROSITE; PROSITE PARTIAL.

PROSITE; PROSITE PARTIAL.

P
O9BGGB SORAR
ID O9BGGB SORAR
AC O9BGGB;
DT 01-JUN-2
DT 07-FEB-2
DE Thyroid
GN Name=THH
OS SOREX al
OC Mammalik
OC Mammalik
OC Mammalik
OC NCBI_Ta
RP NUCLEOT
RA Larkin |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFT TO THE REPORT OF THE PROPERTY OF THE PROP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 3
Q9BGG8_SORAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gonzalez E., Rico G., Mendoza G., Ramos F., Ga
Valadez A., Melendro E.I., Ximenez C.,
"Calreticulin-like molecule in trophozoites of
"MM1:MSS (Swissbrot: accession p83003).",
Am. J. Trop. Med. Hyg. 67:636-639 (2002).
-!- FUNCTION: Molecular calcium binding chapero
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-JAN-2005, integrated int
01-OCT-2001, sequence versi
07-FEB-2006, entry version
Calreticulin (Fragment).
                                                                                                                                                                                                                                                                                                                   01-JUN-2001, integrated into Unil
01-JUN-2001, sequence version 1.
07-FEB-2006, entry version 9.
Thyroid hormone receptor alpha (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Copyrighted by the UniProt Consortium, see http://www.uniprot.org/taDistributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=5759;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Entamoeba histolytica.
Eukaryota; Entamoebidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROTEIN SEQUENCE.
STRAIN=HM-1:IMSS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=12518855;
                                    NUCLEOTIDE
                                                                                                                                                                               Mammalia;
                                                                                                                                                                                                                                                     Sorex araneus (Eurasian
                                                                                                                                                                                                                                                                                             Name=THRA1;
                                                                                                          NCBI_TaxID=42254;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       with almost all of the monoglucosylated glycoproteins that are synthesized in the ER (By similarity): SUBCELLULAR IOCATION: Endoplasmic reticulum lumen (By similarity SIMILARITY: Belongs to the calreticulin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  J. Trop. Med. Hyg. 67:636-639(2002). FUNCTION: Molecular calcium binding chaperone promotin oligomeric assembly and quality control in the ER via calreticulin/calnexin cycle. This lectin may interact
       D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SORAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 QETFSDLWKLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EETFENGWKXI 15
                                                                                                                                                                                   Eutheria;
   SEQUENCE.
                                                                                                                                                                                                                        Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         integrated into UniProtKB/Swiss-Prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                            Laurasiatheria;
                                                                                                                                                                                                                        Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15
          Zhdanova N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mendoza G., Ramos F.,
                                                                                                                                                                                                                                                     common
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                 UniProtKB/TrEMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FC90BCAEFE1BA764 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                     shrew) (European shrew)
                                                                                                                                                                                                                                                                                                                           (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                   Insectivora; Soricidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                see http://www.uniprot.org/terms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Garcia G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
''
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Endoplasmic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA-dependent;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Entamoeba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               promoting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Moran P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     histolytica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         transiently
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              reticulum;
                                                                                                                                                                                       Soricinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               folding,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
RESULT 5
Q9XNQ1_BOOMI
Q9XNQ1_BOOMI PRELIMINARY; PRT; 17 AA.
AC Q9XNQ1;
DT 01-NOV-1999, integrated into UniProtKB/TrEMBL.
DT 01-NOV-1999, sequence version 1.
DT 07-FEB-2006, entry version 10.
DE Cytochrome oxidase subunit 2 (Fragment).
GN Name=COII;
OS Boophilus microplus (Cattle tick).
OG Mitochondrion.
OC Eukaryota; Metazoa; Arthropoda; Chelicerata; Ara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 4
Q6SE52 DROSI
ID Q6SE52_I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SO CCC CCC RT SO CCC CCC RT ST CCC CCC CCC RT ST CCC CCC CCC RT ST CCC CCC RT ST CCC R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q6SE52 DROSI
Q6SE52;
05-JUL-2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PubMed=14762063; DOI=10.1101/gr.1329204;
Halligan D.L., Eyre-Walker A., Andolfatto P., Keig
"Patterns of evolutionary constraints in intronic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Drosophila simulans (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Mapping of five genes from human chromosome 17 to chromosome the common shrew (Sorex araneus)."; Acta Theriol. 45:143-146(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-JUL-2004, sequence version 07-FBB-2006, entry version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AY459549; AAR23007.1; -;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genome Res. 14:273-279(2004).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=7240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Name=Pgi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pgi (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FlyBase; FBgn0012850; Dsim\Pgi.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  deceptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Drosophila."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GO:0004872; F:receptor act:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 PPLSQETFSD
                                                                                                                                                                                                                                                                                                                                             σ
                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                        PPLSQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPLFLEVFED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       integrated into UniProtKB/TrEMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΑΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                1
                                                                                                                                                                                                                                                                                                                                                                                           σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1456 MW;
       Arthropoda; Chelicerata; Arachnida; Acari;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27.6%;
83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ME.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 31;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       775186E3FE5F52E2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2C83E49CCD8E7E37 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genomic_DNA.
ivity; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                                     3.8e+03;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .2e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Keightley P.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      intergenic DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          끍
                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Of
fi
                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
RESULT 6

QGLCZT, HUMAN

ID QGLCZT, H

AC QGLCZT, H

CO COPTEB-2

DT O7-FEB-2

CO EUKARYOT

OC Mammalia

OC HOMOO

ON NCBI_Tax

RM NUCLEOTI

RX MEDLINE-

RA Ahuja S.

RT "Compari

RT "Compari

RT "Compari

RT "Lougari

RT L' COPYTigh

CC COPYTigh

CC COPYTigh

CC COPYTigh

CC COMBL; UI

DR EMBL; U
밁
                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 6
                                                                                                                                                                                                Receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                          Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=95014476; PubMed=7929358; Ahuja S.K., Shetty A., Tiffany H.L., Murphy "Comparison of the genomic organization and human interleukin-8 receptors A and B.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-JUL-2004, integrated into Uni
05-JUL-2004, sequence version 1.
07-FEB-2006, entry version 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q6LCZ7_HUMAN
Q6LCZ7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "The novel mitochondrial gene arrangement of the cattle tick, Boophilus microplus: fivefold tandem repetition of a coding r Mol. Biol. Evol. 16:732-740(1999).
                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human)
Eukaryota; Metazoa; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF110614; AAD28397.1; -; Genomic_DNA.GO; GO:0005739; C:mitochondrion; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Copyrighted Distributed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=N;
MEDLINE=99297341; PubMed=10368952;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J. B101.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Name=IL8RB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Interleukin-8 receptor type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mitochondrion
NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Campbell N.J.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=6941;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Parasitiformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity les 6; Conserv
                                                                                                                                                                                                                                          GO:0004872;
                                                                                                                                                                                                                                                               U11873; AAA64381.1; -; mRNA.
U11874; AAA64382.1; -; mRNA.
U11875; AAA64383.1; -; mRNA.
U11876; AAA64384.1; -; mRNA.
U11877; AAA64386.1; -; mRNA.
U11878; AAA64386.1; -; mRNA.
U11872; AAA64380.1; -; mRNA.
  6
                                         w
                                                                                   Similarity
3; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ű
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chem. 269:26381-26389(1994).
                                         LSQETFSDLW 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SQETFSDL 11
MESDSFEDFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SQLTFSDM 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE.
                                                                                                                                                         15
5 AA;
                                                                                                                                                                           15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         by the UniProt Consortium, see http://www.uniprot.org/terms under the Creative Commons Attribution-NoDerivs License
                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                          F:receptor activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ixodida; Ixodoidea; Ixodidae; Boophilus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Barker S.C.;
                                                                                                                                                                           15
1929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1988
15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Euarchontoglires; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27.6%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata; Craniata; Vertebrata; Euteleostomi
                                                                                                          26.7%;
30.0%;
                                                                                                                                                                         MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B (Fragment)
                                                                                     <u>د</u>
                                                                                                        Score 28; DB 2;
Pred. No. 5.8e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UniProtKB/TrEMBL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 29; I
Pred. No. 4
                                                                                                                                                                         8937AF0B93D4F48C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              319F2D4DA7DA11F3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                            IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       promoter function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                             Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 17;
                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a coding region.";
                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for
                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
QSSR29 MOUSE
ID QSSR29 M
AC QSSR29 M
AC QSSR29;
AC Muss musc
CC Muss musc
CC Muss musc
CC Muroidea
CX MUROIDEA
CC Copyrigh
CC
                                                                  PRESULT Q20KULT ID Q20KULT ID Q20KULT ID Q20KULT AC Q22 AC AC Q22 AC AC Q22 AC A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 6
Query Match
                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                  PubMed=16368250; von Dohlen C.D., Rowe C.A., Heie O.E.; von Dohlen C.D., Rowe C.A., Heie O.E.; "A test of morphological hypotheses for tribal and subtribal relationships of Aphidinae (Insecta: Hemiptera: Aphididae) usequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta;
Neoptera; Paraneoptera; Hemiptera; Sternorrhyncha;
Aphidoidea; Aphididae; Macrosiphini; Hyadaphis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24-JAN-2006, sequence version 3. 21-FEB-2006, entry version 3. Cytochrome c oxidase subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14_9HEMI
020KW4_9HEMI PRELIMINARY; PRT; 18 AA.
020KW4;
024-JAN-2006, integrated into UniprotKB/TremBL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q5SR29_MOUSE PRELIMINARY; PR:
Q5SR29;
21-DEC-2004, integrated into Unil
21-DEC-2004, sequence version 1.
07-FEB-2006, entry version 7.
Hepatic leukemia factor (Fragment
                                                                                                                                                                                                                                                                                 Copyrighted by the UniProt Consortium, Distributed under the Creative Commons
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MGI; MGI:96108; Hlf.
NON TER 19
SEQUENCE 19 AA; 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertel
Mammalia; Eutheria; Euarchontoglires; Glires;
Muroldea; Muridae; Murinae; Mus.
                                                                      SEQUENCE
                                                                                                                                                                      EMBL; DQ005174; AAY55999.1; -; Ge
GO; GO:0005739; C:mitochondrion;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Name=COI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hepatic leukemia factor (Fragment).
Name=Hlf; ORFNames=RP23-220F20.3-004;
                                                                                                           Mitochondrion.
NON_TER
                                                                                                                                                                                                                                                                                                                                                                                     Mol. Phylogenet. Evol. 38:316-329(2006).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mitochondrion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hyadaphis tataricae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AL691494; CAI24995.1; -;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (FEB-2005) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Skuce C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=330428;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ensembl; ENSMUSG00000003949; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DIEEFLSENG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DLWKLLPENG
                                                                      18 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19 AA; 2127 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                      2114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             subunit I (Fragment).
   26.2%;
                                                                      MW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 28; DB Pred. No. 7.4e

1; Mismatches
                                                                      B4E9A8EA785E7E4B CRC64;
   Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7E9AE981C48DFC24 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UniProtKB/TrEMBL
                                                                                                                                                                             Genomic_DNA.n; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                     Commons Attribution-NoDerivs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genomic_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              musculus.
   27.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19
                                                                                                                                                                                                                                                                                                                  see http://www.uniprot.org/terms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
7.4e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A
   ВB
2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 19;
Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pterygota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Aphidiformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              using
                                                                                                                                                                                                                                                                                     License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
Q2QKX1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOUTH THE THE TENT OF THE TENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PubMed=16368250;
von Dohlen C.D., Rowe C.A., Heie O.E.;
"A test of morphological hypotheses for
"elationships of Aphidinae (Insecta: H
sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-JAN-2006, integrated into 1
24-JAN-2006, sequence version
21-FEB-2006, entry version 3.
Cytochrome c oxidase subunit 1
                                                                                                                                                                                                                                                                                                           01-MAY-2000, sequence version 07-FEB-2006, entry version 12 Fas antigen (CD95 antigen) (F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QZQKX1_9HEMI
QZQKX1;
                                                                                                                                                                                                                                                                                                                                                                             Q9UELO;
01-MAY-2000,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Copyrighted
Distributed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta;
Neoptera; Paraneoptera; Hemiptera; Sternorrhyncha;
Aphidoida; Aphididae; Hyalopterus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hyalopterus pruni. Mitochondrion.
                                                                 Wada N., Matsumura
Nakanishi Y.;
                                                                                MEDLINE=95355401; PubMed=7543095; Wada N., Matsumura M., Ohba Y., Ko
                                                                                                                                                                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mitochondrion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
                     "Transcription Stimulaton of
for interleukin-6 expression
                                                                                                                                                   NUCLEOTIDE
                                                                                                                                                                                        NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                         Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                        Q9UELO_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=312888;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _9HEMI
                                                                                                                              SSUE=Blood
    Biol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L; DQ005170; AAY55992.1; -; Genomic_DNA. GO:0005739; C:mitochondrion; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Phylogenet. Evol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   س
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLSQETFSDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ||| : |:|:|
PPL-EHTYSEL 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPLSQETFSDL
                                                                                                                                                 SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      under the Creative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                               integrated into
n-6 expression upon in
270:18007-18012(1995)
                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UniProt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2100 MW;
                                                                                                                                                                                                                               Chordata; Craniata; Vertebrata; Euteleostomi
Euarchontoglires; Primates; Catarrhini; Homi
                                                                                                                                                                                                                                                   Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ersion 3.
subunit I (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               54.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     38:316-329 (2006)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              into UniProtKB/TrEMBL
                                                                                                                                                                                                                                                                                                              (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          potheses for tribal and subtribal
(Insecta: Hemiptera: Aphididae) u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 27.5; DB 2;
Pred. No. 8.3e+03;
3; Mismatches 1
                     the Fas-encoding gene upon influenza virus i
                                                                                                                                                                                                                                                                                                                                                                               UniProtKB/TrEMBL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B399A8EA785E7E4B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sortium, see http://www.uniprot.org/terms
Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                  Kobayashi
                                                                                                        DOI=10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No. 8.3e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                      11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18
                                                                                .1074/jbc.270.30
i N., Takizawa T
                                                                                                                                                                                                                                                                                                                                                                                                                        AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                          infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pterygota;
Aphidiformes;
                                           by nuclear
                                                                                                        .18007;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
                                                                                                                                                                                                                                    Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ۲
                                             factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
```

```
RESULT 11
Q71H30 9HY
ID 9HY
ID 9HY
ID 57-9HY
AC Q71H;
DT 05-JT
DT 05-JT
DT 05-JT
DT 07-M
DE CYto
OS Andr
CO Neo
OS Andr
CO Neo
OC Neo
OC And
CO NCB
RN (11)
RP NUC
RC STF
RX Pul
RT CO
RT CO
CC CC
CC 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE COCCEPT TO DRAW TO THE PROPERTY OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    [2]
NUCLEOTIDE SEQUENCE.
Muschen M., Re D., Br.
Kuppers R., Rajewsky i
Submitted (SEP-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; ACEMBL; 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q71H30 9HYME PRELIMINARY; PRT; 1
Q71H30;
Q5-JUL-2004, integrated into UniProtKB/
Q5-JUL-2004, sequence version 1.
Q7-MAR-2006, entry version 9.
Cytochrome oxidase subunit I (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                  PubMed=16343953; DOI=10.1016/j.ympev.2005.10.003; Larkin L.L., Neff J.L., Simpson B.B.; Larkin L.L., Neff J.L., Simpson B.B.; "Phylogeny of the Callandrena subgenus of Andrena Andrenidae) based on mitochondrial and nuclear DN convergent evolution.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Copyrighted
Distributed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=22404279; PubMed=12516573; DOI=10.1002/1521-4141(200212)32:12-3785::AID-IMMU3785>3.0.CO;2-E; Kurth J., Perniok A., Schmitz R., Iking-Konert C., Chiorazzi N., Thompson K.M., Winkler T., Rajewsky K., Kueppers R.; "Lack of deleterious somatic mutations in the CD95 gene of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Neoptera; Endopterygota; Andrenidae; Andreninae; l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  autoantibody-producing cell lines.";
Eur. J. Immunol. 32:3785-3792(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                plasmablasts from systemic lupus erythematosus patients autoantibody-producing cell line, "
                                              Mitochondrion.
                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                   Copyrighted Distributed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=205219;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Andrena braccata.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE.
            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mitochondrion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMYH6
                                                                                                                              GO:0005739;
                                                                                                                                                                                                                                                                                                                                                                     Phylogenet. Evol. 38:330-343(2006).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AJZ79011; CAC35539.1; -; Genomic_DNA.
AJZ79012; CAC35540.1; -; Genomic_DNA.
AJZ79013; CAC35541.1; -; Genomic_DNA.
AJS09179; CAD48929.1; -; Genomic_DNA.
AJS09180; CAD48930.1; -; Genomic_DNA.
BER 11 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D31968;
                                                                                                                                                                   AF504324;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11 LWKLLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            dTTLMI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (SEP-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Endopterygota; Hymenoptera; Apocrita; Aculeata; Apoidea;
; Andreninae; Andrena; Callandrena.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11 AA;
            14
                                                                                                                                                                                                                                                   under the Creative
                                                                                                                                                                                                                                                                                             γģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                under the Creative Commons
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  by the UniProt Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BAA20850.1; -; Genomic
            A
                                                                                                                                                                                                                                                                                             the UniProt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16
                                                                                                                                  C:mitochondrion;
                                                                                                                                                                        AAQ07619.1; -;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1256 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jungnickel
)) to the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Brauninger A.,
        1657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25.7%;
66.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           into UniProtKB/TrEMBL
                ¥.
                                                                                                                                                                                                                                                                                             Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             el B., Diehl V., Ra
EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0802145E2731B370
                FEA178F0E615AFBA CRC64;
                                                                                                                                                                   Genomic DNA
                                                                                                                                                                                                                                                       Commons
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                      IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wolf J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14
                                                                                                                                                                                                                                               see http://www.uniprot.org/terms
Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                see http://www.uniprot.org/terms
Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                             nuclear DNA data:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of Andrena
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hansmann M.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rajewsky K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Hymenoptera:
A data: Polyphyly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kuppers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Diehl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

.

```
RESULT
P82326_
     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
Q6LD35_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE CONTRACTOR OF THE SOURCE CONTRACTOR OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
PROTEIN SEQUENCE, SUBCELLULAR LOCATION, AND D STRAIN-CV. DE GRACE, TISSUE=LBAF;
MEDLINE=20181728; PubMed=10715320; DOI=10.110
Peltier J.-B., Friso G., Kalume D.E., Roepsto Adamska I., van Wijk K.J.;
"Proteomics of the chloroplast: systematic id targeting analysis of lumenal and peripheral plant Cell 12:319-341 (2000).
-!- SUBCELLULAR LOCATION: CHLOROPLAST THYLAKO
                                                                                                                                                                                                                                                                                                                                                                        P82326;
01-JUN-2000, integrated into Unit
01-JUN-2000, sequence version 1.
07-FEB-2006, entry version 14.
                                                                                                                                                                                                                                                            Unknown protein from 2D-page of thylakoid lumen (SPOT107) (Fragment) Pisum sativum (Garden pea).

Eukaryota, Viridiplantae, Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons; roside; eurosids I; Fabales; Fabaceae; Papilionoideae; Vicieae; Pisu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; UC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Thuerauf D.J., Hanford D.S., Glembotski C.C., "Regulation of rat brain natriuretic peptide to potential role for GATA-related transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE.
STRAIN-Sprague Dawley;
MEDLINE=94299479; PubMed=8027030;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; Muroldea; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-JUL-2004, integrated int 05-JUL-2004, sequence versi 07-FEB-2006, entry version
                                                                                                                                                                                                                                  NCBI_TaxID=3888;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P82326_PEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus norvegicus (Rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Name=BNP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Brain natriuretic peptide (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q6LD35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q6LD35_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biol. Chem. 269:17772-17775(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene expression."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      U02972; AAA21648.1; -;
ER 19 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DLOKVLPO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DLWKLLPE 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FSDLWKLLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FTNLWXXTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                    integrated into UniProtKB/TrEMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      integrated into UniProtKB/TrEMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2256 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25.7%;
62.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7030;
Glembotski C.C.;
riuretic peptide transcription.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 27; DB 2;
Pred. No. 1.1e+04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 27; DB 2;
Pred. No. 7.6e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5E3DB548B919F1C4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                               peripheral
                                                                                                                 DOI=10.1105/tpc.12.3.319;
E., Roepstorff P., Nilsson
  THYLAKOID MEMBRANE LUMEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19
                                                                                                                                                                                             AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      À
                                             identification and
al thylakoid protei
                                                                                                                                                                                             DEVELOPMENTAL STAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                      Nilsson F.,
                                               proteins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         myocardial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                   Pisum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
RESULT 15
Q9UJZ3 HUMAN
ID Q9UJZ3;
AC Q9UJZ3;
DT 01-MAY-2000, i
DT 01-MAY-2006, e
DE OVICHCT Glycop
GN Name=OGP;
OS Homo sapiens (
OC Eukaryota; Met
OC Homo.
OX NCBI TaxID=960
RN [1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT CAPENIA RESULT ID OVS.7 ID OVS.7
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local (
    Homo.
NCBI_TaxID=9606;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9QVS7_9MURI
Q9QVS7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GO; GO:0009507; C:chloro
GO; GO:0009579; C:thylal
Chloroplast; Thylakoid.
NON_TER 14 14
                                                                                                                                                              Oviduct glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE SEQUENCE.
MEDLINE=95201434; PubMed=7534515;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Euarchontogl
Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurogna
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAY-2000, sequence version 1.
07-FEB-2006, entry version 11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Copyrighted
Distributed
                                                                                                                     Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Favor J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sandulache
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=10095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-2000,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Molecular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lactate dehydrogenase-A (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9MURI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEVELOPMENTAL STAGE: UNFOLDED AND FULLY DEVELOPED LEAVES MISCELLANEOUS: ON THE 2D-GEL THE DETERMINED PI OF THIS UN PROTEIN IS: 6.0, ITS MW IS: 18.3 kDa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GO:0009507; C:chloroplast; IE
GO:0009579; C:thylakoid; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genome 5:777-780(1994).
                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                         1 PPLSQETFSDLWK 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                PELGTDAHKEQWK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PPLSQE
                                                                   .; Metazoa;
Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PPLSTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                analysis of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             by the UniProt Consortium, see http://www.uniprot.org/terms under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                    sequence version entry version 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                    integrated into UniProtKB/TrEMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      integrated into UniProtKB/TrEMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pretsch
                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1982 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1580 MW;
                                                                   Chordata; Craniata; Vertebr
Euarchontoglires; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24.8%;
83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ε
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              four lactate dehydrogenase-A mutants in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chatterjee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E941E0A3F2477D45 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 26; I
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314A6CB514E1B237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26;
                                                                                                                                                                                                                                                                               18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B., Gimbel W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17
                                                                   Vertebrata; Euteleo
rimates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .3e+04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .le+04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                           Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Graw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UNKNOWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
RP NUCLEOTIDE SEQUENCE.
RA Lee K.F., Kwok K.L., Agarwal A., Lee Y.L.;
RL Submitted (FEB-2000) to the EMBL/GenBank/DDBJ databases.
CC Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC Copyrighted by the UniProt Commons Attribution-NoDerivs License
CC Distributed under the Creative Commons Attribution-NoDerivs License
CC DE EMBL; AF189710; AAF01065.1; -; Genomic DNA.
DR Ensembl; ENSG00000085465; Homo sapiens.
FT NON TER 18 18
SQ SEQUENCE 18 AA; 2201 MW; SE8FD91EA210E516 CRC64;
Query Match 24.8%; Score 26; DB 2; Length 18;
Best Local Similarity 80.0%; Pred. No. 1.4e+04;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

OY 11 LWKLL 15
Db 1 MWKLL 5
Search completed: July 5, 2006, 22:59:21
Job time: 295 secs
```

GenCore version 5.1.9
Copyright (c) 1993 - 2006 Biocceleration Ltd.

```
Minimum
Maximum
                                                                                                                                                              Post-processing: Minimum Match
Maximum Match
Listing first
                                                                                                                                                                                                                                                                                                                                                                   Title:
Perfect score:
                                                                                                                                      Database
                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                        Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM protein -
                                                                                                                                                                                                                    DB DB
                                                                                                                                                                                                                    seq length:
seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein search, using sw
A_Geneseq_8:*
1: geneseqp198
2: geneseqp200
4: geneseqp200
5: geneseqp200
6: geneseqp200
7: geneseqp200
9: geneseqp200
9: geneseqp200
10: geneseqp200
                                                                                                                                                                                                                                                                                                             BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                      July
                                                                                                                                                                                                                                                                                      2589679 seqs, 457216429 residues
                                                                                                                                                                                                                                                                                                                                                                    US-09-403-440A-2
105
                                                                                                                                                                                                                                                                                                                                                      PPLSQETFSDLWKLLPENG 19
              geneseqp2004s:*
geneseqp2005s:*
                                                      geneseqp2002s:*
geneseqp2003as:*
                                                                                            geneseqp1990s:*
geneseqp2000s:*
                                                                                                                       geneseqp1980s:*
                                        geneseqp2003bs:*
                                                                                 geneseqp2001s:*
  geneseqp2006s:*
                                                                                                                                                                                                                                                                                                                                                                                                       5, 2006, 22:50:51; Search time 192 Seconds (without alignments) 45.245 Million cell updates/sec
                                                                                                                                                                                                                    19
                                                                                                                                                                                                                                                                                                                Gapext 0
                                                                                                                                                                0%
100%
45 st
                                                                                                                                                                summaries
```

Pred. No: is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	00	7	σ	υı	4	u	2	ы	NO.	Result
77	77	77	77	77	77	18	81	81	18	81	81	81	81	85	88	92	92	95	97	99	105	105	Score	
73.3	73.3	73.3	73.3	73.3	73.3	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1	81.0	83.8	87.6	87.6	90.5	92.4	94.3	100.0	100.0	Match Length	Query
15	15	15	15	15	15	17	15	15	15	15	15	15	15	16	16	19	19	19	19	18	19	19		
4.	4	W	N	N	N	10	9	œ	œ	œ	7	σ	N	10	δ	8	o	σ	N	N	N	N	DB.	
AAG89500	AAG89730	AAB29157	AAR89914	AAR54910	AAR54909	AEE74960	AED80637	ADQ90921	ADN48957	ADG78883	ADC22292	ABG75806	AAY06310	AEF16088	AAE30872	ADR20234	ABG73435	AAE30870	AAW47074	AAW37228	AAW82319	AAW82321	ID	
p53 DR 3	Ξ.	Aab29157 Peptide #	Aar89914 p53 prote	Aar54910 Immunodom	Aar54909 Immunodom	Aee74960 p53/MDM2	Aed80637 Human p53	Adq90921 Pancreati		Adg78883 Human p53	Prote	Abg75806 Solid pha	Aay06310 Human p53	Aef16088 Novel sta	Aae30872 BOX-1 dom	Adr20234 Mixed ele	Human	Aae30870 Peptide u	p53/	Aaw37228 p53 N-ter	Aaw82319 p53 homol	Aaw82321 p53 homol	Description	

45	44	43	42	41	40	9	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24
69	70	70	70	71	71	71	73	73	73	73	73	73	74	74	74	74	75	77	77	77	77
65.7	66.7	66.7	66.7	67.6	67.6	67.6	69.5	69.5	69.5	69.5	69.5	69.5	70.5	70.5	70.5	70.5	71.4	73.3	73.3	73.3	73.3
15	15	13	13	15	15	15	16	15	15	15	14	13	18	15	15	14	16	19	17	15	15
ω	ထ	8	w	w	w	W	.10		σ	w	ഗ	9	œ	w	ω	ထ	10	σ	N	œ	σ
AAB29162	ADT78987	ADT79007	AAY57799	AAB29160	AAB29161	AAY99001	AEF16090	ADT78973	AAE30860	AAB29167	ABB05528	ADZ38449	ADT79028	AAB29163	AAB29159	ADU00102	AEF16089	ABP97122	AAY45227	ADT02875	ABG73434
Aab29162 F	Adt78987 [	Adt79007 F	Aay57799 T	Aab29160 F		Aay99001 H	Aef16090	Adt78973 H			Abb05528 E			Aab29163 F		Adu00102 P	Aef16089 Novel		Aay45227 p	Adt02875 H	Abg73434 H
Peptide #	DNA-PK as	Human p53	TRAM-inte	Peptide #	Peptide #	HLA class	Aef16090 Novel sta	Human p53	EGFP-S20D	Peptide #	Biotinyla	Human kin	Mouse p53	Peptide #	Peptide #	Amino aci	Novel sta	Human p53	p53 pepti	Human p53	Human p53

ALIGNMENTS

#### RESULT 1 Synthetic. 22-APR-1997; 20-APR-1998; 29-OCT-1998. WO9847919-A1 p53; mdm2; inhibitor; therapy; activator; treatment; cancer; medicament. p53 homologue TIP peptide 22-FEB-1999 AAW82321; AAW82321 standard; peptide; 19 (first entry) 97GB-00008089 98WO-GB001140 A

New substance with a mdm2 binding domain and coupling partner - useful for stabilising in cells without an efficient mdm2-mediated degradation pathway.

WPI; 1998-609975/51.

Lane DP;

(UYDU-) UNIV DUNDEE.

Disclosure; Fig 1; 52pp; English.

This sequence is a peptide homologue of a region of p53 which binds to mdm2. This peptide is used in the construction of a novel agent capable of disrupting the binding of p53 and mdm2 or inhibiting the production of mdm2 in a population of cells. This agent is also used in the preparation of a therapeutic for activating p53, where the population of cells do not overexpress mdm2. Inhibiting mdm2 production and/or inhibiting the binding of mdm2 to p53 allows levely p53 to increase by reducing the clearance of p53 by mdm2, and can be used to activate p53 function. The agents for use in therapeutics for activating p53 can be used for the treatment of cancer, viral conditions or other conditions associated with non-functional p53

```
RESULT 3
AAW37228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 2
AAW82319
ID AAW8
                                                                                                                                          AXB
                                                                 밁
                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                    Query Match
Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                 This sequence is a peptide homologue of a region of p53 which binds to mdm2. This peptide is used in the construction of a novel agent capable of disrupting the binding of p53 and mdm2 or inhibiting the production of mdm2 in a population of cells. This agent is also used in the preparation of a therapeutic for activating p53, where the population of cells do not overexpress mdm2. Inhibiting mdm2 production and/or inhibiting the binding of mdm2 to p53 allows levels of p53 to increase by reducing the clearance of p53 by mdm2, and can be used to activate p53 function. The agents for use in therapeutics for activating p53 can be used for the treatment of cancer, viral conditions or other conditions associated with
AAW37228;
                 AAW37228 standard; peptide; 18
                                                                                                                                          Sequence 19
                                                                                                                                                                                                                                                                         Disclosure; Fig 1; 52pp; English.
                                                                                                                                                                                                                                                                                          New agents which inhibit interaction of p53 and mdm2 - useful for activating p53, e.g. for treating cancers, viral conditions or other conditions associated with non functional p53 or mdm2.
                                                                                                                                                                                                                                                                                                                                WPI; 1998-609932/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      p53 homologue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 19
                                                                                                                                                            non-functional
                                                                                                                                                                                                                                                                                                                                                                                                           20-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                              29-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9847525-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  p53; mdm2; inhibitor; therapy; activator; treatment; cancer; medicament.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAW82319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAW82319 standard;
                                                                                                                                                                                                                                                                                                                                                                      (UYDU-) UNIV DUNDEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPLSQETFSDLWKLLPENG 19
                                                                          PPLSQETFSDLWKLLPENG 19
                                                                PPLSQETFSDLWKLLPENG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPLSQETFSDLWKLLPENG 19
                                                                                                                                          AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TIP peptide
                                                                                                                                                            p53
                                                                                                                                                                                                                                                                                                                                                                                       97GB-00008092
                                                                                                                                                                                                                                                                                                                                                                                                           98WO-GB001144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptide; 19
                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                            Score 105; DB 2;
Pred. No. 1.7e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 105; DB 2;
Pred. No. 1.7e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A
                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 19;
                                                                                                                     Length 19;
                                                                                                    Indels
                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                   Gaps
                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                       밁
```

```
RESULT 4
AAW47074
ID AAW4
XX
AC AAW4
AC AAW4
AC 19-M
XX
DT 19-M
XX
DE P53/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This represents a p53 N-terminal peptide fragment used in an Elisa TIP cassay for analysing the interaction between human oncogenic protein MDM2 and p53. The invention provides peptide derivatives capable of binding to the human MDM2. These peptides can specifically inhibit or block the binding of MDM2. These peptides can specifically inhibit or block the binding of MDM2 to the human p53 protein, in vitro or in vivo. Inhibiting the interaction between the p53 and MDM2 can induce growth arrest or apoptosis in tumour cells comprising a wild-type p53 and non-elevated levels of MDM2. The peptides may be used to identify molecules that bind to to MDM2 and to identify and design inhibitors of MDM2/p53 binding. They may also be used to purify binding partners especially MDM2, diagnose disease by measuring levels of MDM2 in blood of cancer and leukaemia patients and for treatment or prevention of disease involving p53/MDM2 interactions, especially tumours and viral infections. The peptides can be administered masally, rectally, orally or by injection. By interfering with MDM2/p53 interaction, the peptides can activate p53 function and colls. The peptides an activate p53 function and solution in normal cells. The peptides which mimic the MDM2 binding site in p53, have a significantly greater blocking activity compared with
                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Compounds binding to MDM2 protein and inhibit its interaction with p53 useful in, e.g. diagnosis and treatment of cancer and viral infections and identifying binding agents.
                         p53/RB interaction inhibiting peptide 6 (residues 11-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 18 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 34; 45pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lane D, Boettger V, Garcia-Echeverria C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-JUL-1996;
07-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9801467-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MDM2; oncogenic protein; p53; human; inhibition; interaction; cancer; tumour; diagnosis; binding; viral infection; Elisa TIP assay.
                                                                                     19-MAY-1998
                                                                                                                                                                                           AAW47074 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (NOVS )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              p53 N-terminal peptide fragment for Elisa TIP assay.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 100.
mes 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                     1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NOVARTIS AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CANCER RES CAMPAIGN TECHNOLOGY.
                                                                                                                                                                                                                                                                                                                                PPLSQETFSDLWKLLPEN 18
                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96GB-00014197.
97GB-00007041.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97WO-EP003549
                                                                                                                                                                                           peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                              94.3%; 500
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Boettger A, Picks
Chene P, Furet P;
                                                                                                                                                                                              19
                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 99; DB; Pred. No. 1.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Picksley
                                                                                                                                                                                                                                                                                                                                                                                                                                         1.5e-08;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hochkeppel
                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                            ٠,
                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

of human p53).

```
밁
                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                               This peptide fragment of p53 is an inhibitor of the interaction between a C p53 protein and a retinoblastoma (RB) protein. This peptide corresponds to residues 11-29 of human p53 (AAM47079). The interaction between p53 c and Rb is found to be critical for determining whether or not a cell centers apoptosis. Apoptosis is prevented if interaction occurs. The interaction is between regions 1-71 or 290-393 of p53 and region 379-928 of Rb. The invention provides methods to identify compounds able to comprises combining p53 and Rb, or their fragments, with a test compound and detecting interaction/binding between p53 and Rb protein. The method compounds are used in human or veterinary medicine to modulate p53 activity and processes, specifically for inducing apoptosis in tumour cells (possibly also in cells infected by virus), in vivo or in vitro. Expression of these modulators by gene therapy methods is also contemplated. Other activities that can be affected are transcription repression, G1 arrest, DNA repair, homologous recombination and 3'-5'-
                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 19 AA;
                                                                                                                                                   24-FEB-2003
                                                                                                                                                                                                           AAE30870 standard;
               WO200265134-A2
                                                                       p53 polypeptide; p
cancer; ischaemia;
                                                                                                                 Peptide used in modulating the binding of p53 to p300.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       repression, G1 arrest, DNA repair, homologous recombination and exonuclease activity. Modulation of interaction with Rb may also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Identifying compounds that modulate interaction of p53 and Rb protein or those that bind to Rb protein, used to induce apoptosis, specifical for treatment of tumours.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Retinoblastoma gene; RB; p53 protein; interaction; inhibitor; tumour; apoptosis; modulator; medicine; veterinary; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kouzarides T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (CANC-) CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-APR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9741433-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                17;
                                                                                                                                                                                                                                                                                                                    ۲
                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                    PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                      PPLSQETFSDLWKLIPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 63; 83pp; English.
                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97WO-GB001168
                                                                       p300 polypeptide; cell cycle; cell death; a; cytostatic; vasotropic.
                                                                                                                                                                                                           peptide; 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAMPAIGN TECHNOLOGY.
                                                                                                                                                                                                                                                                                                                                                             92.4%;
                                                                                                                                                                                                                                                                                      19
                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                             Score 97; DB 2;
Pred. No. 3.3e-08;
                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                           Length 19
                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                     gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           specifically
                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                0
```

```
RESULT 6
ABG73435
ID ABG7
  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
Novel polypeptide that inhibits degradation of endogenous mammalian cell, useful for treating cancer, e.g. cervical tumor such as sarcoma or carcinoma.
                                                                                                                                                                                                                                                                      carcinoma; squamous cell carcinoma; lung cancer; pancreatic cleukaemia; lymphoma; neuroblastoma; sarcoma; osteosarcoma; glcolon carcinoma; melanoma; choriocarcinoma; breast carcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to a peptide for use in modulating the binding of a p53 polypeptide to a p300 polypeptide. The new peptide is useful in modulating the binding of a p53 polypeptide to a p300 polypeptide. The peptide may be used to regulate the mammalian cell cycle or to induce or prevent cell death, for the treatment of cancer or ischaemia. The invention is useful in gene therapy. The present sequence is a peptide used in modulating the binding of p53 to p300
                                                                                                                                                                                                                                                                                                 Human; p53; degradation; cervical cancer; tumour; ovarian cancer; glioma; carcinoma; squamous cell carcinoma; lung cancer; pancreatic cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New peptide for modulating the binding of p53 polypeptide to p300 polypeptide, useful for regulating the mammalian cell cycle for the treatment of cancer or ischemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hupp
                                                                       Yuan Z,
                                                                                              (YUAN/) YUAN Z. (GUJJ/) GU J.
                                                                                                                                    08-DEC-1999;
                                                                                                                                                            07-DEC-2000; 2000US-00732384
                                                                                                                                                                                                             US2002132977-A1
                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                     Human p53 peptide fragment
                                                                                                                                                                                                                                                                                                                                                               01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                ABG73435 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 19 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 14; Page 66; 87pp; English.
                                                                                                                                                                                      19-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2003-018623/01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-FEB-2001; 2001GB-00003508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-FEB-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UYDU-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-AUG-2002
                                                 2003-197937/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 PPLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VIND
                                                                        Gu J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPLSQETFDDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dornan D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2002WO-GB000640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DUNDER
                                                                                                                                    99US-0169816P
                                                                                                                                                                                                                                                          rhabdomyosarcoma; Mdm2; cytostatic; antitumour.
                                                                                                                                                                                                                                                                                                                                                                                                               peptide; 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        90.5%;
                                                                                                                                                                                                                                                                                                                                      #4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.9e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
           p53 in cancer
                                                                                                                                                                                                                                                                                    glioblastoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
             og a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
ADR20234
ID ADR2
XX
AC ADR2
XX
AC ADR2
XX
Mix
XX
Mix
XX
KW Mix
XX
XX
Syn
XX
OS Syn
XX

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pancreatic cancer, leukaemia, lymphoma, glioma, neuroblastoma, osteosarcoma, colon carcinoma, melanoma, glioma, neuroblastoma, colon carcinoma, melanoma, choriocarcinoma, breast carcinoma, glioblastoma, neuroblastoma and rhabdomyosarcoma cells. The cell comprises an Mdm2 amplification or overexpresses Mdm2. A degradation resistant p53 polypeptide is useful for inhibiting tumour growth, where the tumour is a cervical cancer and concer and control of the metaling cancer. This sequence represents a region of the human p53 polypeptide which does not form part of an inhibitory peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a substantially pure polypeptide that inhibits degradation of endogenous p53 in a mammalian cell. The polypeptide or a synthetic polypeptide comprising a region of the pure polypeptide is useful for inhibiting degradation of endogenous p53 in a mammalian cell, e.g. in cervical cancer cells or tumour cells selected from sarcoma,
at least a first target molecule in a sample, comprising: sever. moderate affinity binding elements distributed on a surface of, operatively coupled to a support, where concomitant binding of target molecule to two or more of the binding elements results
                                                                                                                                                                                                                                                                          Composition useful for assessing presence of first target molecule such as polypeptide in sample e.g., blood, comprises several low-to-moderate affinity binding elements distributed on surface of, and operatively
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        medical diagnostic device; research; medicine; mil diagnostic; biological pathway; protein detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mixed element capture agent study associated peptide Gal80bp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-NOV-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADR20234 standard; peptide; 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 5; Page 9; 21pp; English
                                                                                                                        The invention describes a composition (I) for assessing the presence of
                                                                                                                                                                                         Example 2; SEQ ID NO 9;
                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2004-593073/57.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (KODA/) KODADEK T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-JAN-2003; 2003US-0438805P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-JAN-2004; 2004US-00754457.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US2004161798-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             target molecule
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  element
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity
17; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 PLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                       ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLSQETFSDLWKLLPEN 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              capture
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             detection; binding element; concomitant binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               87.6%; Sur
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              agent study.
                                                                                                                                                                                         58pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 92; DB; Pred. No. 2.1
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               medicine; military; forensic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 6; Le
2.1e-07;
hes 0;
                                                                                              comprising: several
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                   the first
                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                 TOM-FO-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
RESULT 8
AASSUGY
ID AAE3
XX AAE3
XX AAE3
XX AAE3
XX E BOX
XX DS BOX
XX CANC
DS BOX
XX Unic
XX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CC determining the presence of a target molecule, which is a modified cc protein in a sample. The binding elements of (I) are useful: in the CC construction of medical diagnostic devices; research; medicine; military; CC forensics, diagnostic application, detecting presence or absence of cc multiple biological markers in complex samples such as blood or urine; CC and detecting components of a biological pathway. The binding elements of CC (I) interact with the target molecule with high affinity and specificity. CC (I) enables detection of substances from a variety of samples in a rapid high throughput format. The binding elements of (I) are easily produced in large quantities with efficient quality control and can be easily tailored to allow attachment to surfaces. (I) provides an easy, CC reproducible and cost-effective method of screening, detecting and CC characterising various components from a variety of samples. The binding elements are suitable in high throughput, robust CC technology that makes it suitable in military, medical and research CC technology that makes it suitable in military, medical and research contents. This is the amino acid sequence of a peptide used in a mixed component capture agent study associated with the composition of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       affinity interaction with the first target molecule; or chimeric binding elements distributed on a surface of, and operatively coupled to a support, where concomitant binding of the first target molecule to two or more of the chimeric binding elements results in a high affinity interaction with the first target molecule. (I) is useful for assessing the presence of at least a first target molecule such as polypeptide which is modified in a sample e.g. blood or urine. (I) is useful for
                                                                New peptide for modulating the binding of p53 polypeptide to p300 polypeptide, useful for regulating the mammalian cell cycle for the treatment of cancer or ischemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         p53 polypeptide; p300 polypeptide; cell cycle; cell death; gene therapy; cancer; ischaemia; cytostatic; vasotropic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 19
                                                                                                                                                                                                                                                                                                                                                                                                                   13-FEB-2001; 2001GB-00003508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13-FEB-2002; 2002WO-GB000640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BOX-1 domain peptide for p300 binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAE30872;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAE30872 standard; peptide; 16
                                                                                                                                                                                                           WPI; 2003-018623/01.
                                                                                                                                                                                                                                                                            Hupp TR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200265134-A2
                                                                                                                                                                                                                                                                                                                                               (UYDU-) UNIV DUNDEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 PLSQETFSDLWICLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                            Dornan D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΑĄ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87.6%; Score 92; DB
100.0%; Pred. No. 2.
Live 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 8; L, 2.1e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
```

Example 2; Fig 6C; 87pp; English

```
RESULT 9
AEF16088
    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #86666668#
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                      18-MAY-1999;
26-NOV-1999;
18-MAY-2000;
This invention relates to a novel stabilized alpha-helix peptide structure which comprises a selected number of any combination of natural and unnatural amino acids (where the peptide further comprises at least one cross-linking moiety that stabilizes the peptide in alpha-helix conformation). The invention may be useful for the development of compounds with a cytostatic or virucide activity acting as a cell proliferation inhibitor, viral replication inhibitor, gene expression or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a peptide for use in modulating the binding of a p53 polypeptide to a p300 polypeptide. The new peptide is useful in modulating the binding of a p53 polypeptide to a p300 polypeptide. The peptide may be used to regulate the mammalian cell cycle or to induce or prevent cell death, for the treatment of cancer or ischaemia. The invention is useful in gene therapy. The present sequence is BOX-1 domain
                                                                                                                            New stabilized alpha-helix peptide structure useful in medicinal chemistry as therapeutic agents comprises selected number of any combination of natural and unnatural amino acids, where the peptide further comprises cross-linking moieties.
                                                                                                        Disclosure;
                                                                                                                                                                                               WPI; 2006-088591/09
                                                                                                                                                                                                                         Verdine
                                                                                                                                                                                                                                                 (VERD/)
(SCHA/)
                                                                                                                                                                                                                                                                                                                                        09-JUN-2005; 2005US-00148976
                                                                                                                                                                                                                                                                                                                                                                                            US2006008848-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                  Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein structure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel stabilized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-MAR-2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AEF16088;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AEF16088 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      replication;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16;
                                                                                                                                                                                                                        ď,
                                                                                                                                                                                                                                                VERDINE G L. SCHAFMEISTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PPLSQETFSDLWKLLP 16
                                                                                                        Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     p300 binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83.8%; Silarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                       2000US-00574086
                                                                                                                                                                                                                         Schafmeister
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                   99US-0134708P.
99US-0167634P.
                                                                                                     16; 34pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                  /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "C-terminal amide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         alpha-helix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cytostatic; virucide; gene expression; cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peptide; 16
                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                 Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                              "N-terminal acetyl"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 88;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           structure-related peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 6; L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cell proliferation;
signaling.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BOX-1 domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
RESULT 10
AAY06310
ID AAY06
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             other cell signaling process inhibitor. The stabilized alpha-helix peptide structure generates stabilized-helical structures, as well as other secondary structures, to enable the investigation of complex structure-function relationships in proteins and enable the development of new therapeutics incorporating specific stabilized secondary structure motifs. The peptides can be synthesized one-at-a time, using a traditional peptide to generate the structure motif, and may control (promote or inhibit) cell functions. The present sequence is that of a peptide which was used during the exemplification of the novel stabilized alpha-helix peptide structures of the invention.
                                      This synthetic peptide corresponds to amino acids 13-27 of human p53. It was used to raise anti-peptide p53.1 and anti-RB18A antibodies in rabbit. RB18A (see AAY06309) is a novel p53 regulatory protein of the invention. The antibodies were used in immunoscreenings that led to the isolation of a CDNA clone (see AAX59124) encoding human RB18A. The invention provides methods and compositions for the diagnostic and therapeutic applications of RB18A, in particular for the diagnosis, prevention or treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RB18A; p53 regulatory protein; apoptosis; neoplasia; inflanwound healing; graft rejection; reperfusion injury; myocardial infarction; stroke; traumatic brain injury; neurodegenerative disease; ischaemia; toxaemia; infection; hepatitis; breast cancer; ovarian cancer; colon cancer; di
                                                                                                                                                                                                   New p53 regulatory protein (RB18A) useful primers to detect the transcription rate (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     06-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 16 AA;
                         neoplasia
                                                                                                                                                          Example 1;
                                                                                                                                                                                                                                                 WPI; 1999-395177/33.
                                                                                                                                                                                                                                                                            Frade
                                                                                                                                                                                                                                                                                                        (INRM ) INSERM
                                                                                                                                                                                                                                                                                                                                     15-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                  14-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                               24-JUN-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                            WO9931231-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 therapy; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY06310;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY06310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LSOETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peptide (aal3-27).
                                                                                                                                                          Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                                                        INST NAT SANTE & RECH MEDICALE
                                                                                                                                                                                                                                                                                                                                     97EP-00403051.
                                                                                                                                                                                                                                                                                                                                                                  98WO-EP008560
                                                                                                                                                          25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            peptide;
                                                                                                                                                       87pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81.0%;
100.0%;
                                                                                                                                                          English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 85;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10; 1
2.3e-06;
                                                                                                                                                                                                      l as,
                                                                                                                                                                                                      abundance
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                      sources of probes
nnce of RB18A mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                      and
in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

Query Match

77

Score

81;

DB

2

Length

15

Sequence 15

₽ K

```
RESULT 11
ABG75806
ID ABG75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
 Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                           SPPE; solid phase precipitation and extraction; analyte; solid-phase extraction; SPE; peptide synthesis; chromatography; light scattering detector; ether; trifluoroacetic acid; peptidyl-resin.
Isolation of biological
and/or organic solvent,
                                                                                                                                                                                                       Modified-site
                                                                                                                                                                                                                                        Modified-site
                                                                                                                                                                                                                                                               Modified-site
                                                                                                                                                                                                                                                                                                 Modified-site
                                                                                                                                                                                                                                                                                                                                  Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                   Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Solid phase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABG75806 standard;
                          WPI; 2003-298114/29.
                                                           (DULY/)
(LAUR/)
                                                                          (UDEL/)
                                                                                                            07-JUL-1999;
                                                                                                                            06-JUL-2000; 2000US-00610761
                                                                                                                                             12-NOV-2002
                                                                                                                                                             US6479296-B1
                                                                                                                                                                                                                                                                                                                                                                 Modified-site
                                                                                           (NNOB)
                                                                  BONNER A G.
) UDELL L S.
) CREASEY W A.
) DULY S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 PLSQETFSDLWKLLP
                                          Æ,
                                                           LAURSEN R A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                         Udell LS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             precipitation and extraction method peptidyl-resin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                            99US-0142582P
                                                                                                                                                                                                                                                                      /note= "OTHER= modified
specification)"
                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                             /note= "OTHER=
specification)
                                                                                                                                                                                                             /label= OTHER
/note= "OTHER= modified
specification)"
                                                                                                                                                                                                                                                                                                        specification)
                                                                                                                                                                                                                                                                                                                                         specification)
                                                                                                                                                                                                                                                                                                                                                                          specification)
                                                                                                                                                                                                                                                                                                                 'label= OTHER
'note= "OTHER=
                                                                                                                                                                                                                                                                                                                                                 note= "OTHER=
                                                                                                                                                                                                                                                note=
                                                                                                                                                                                                                                                                                                                                                                                           label= OTHER
                                                                                                                                                                                              label= OTHER
                                                                                                                                                                                                                                                       label= OTHER
                                                                                                                                                                                                                                                                                                                                                          label= OTHER
                                                                                                                                                                                                                                                                                       label= OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                    "OTHER=
                                                                                                                                                                                                                                                "OTHER=
                                          Creasey
analyte, e.g. protein, from sample, e.g. aqueous involves precipitating biological analyte on % \left\{ 1,2,\ldots ,n\right\}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 9.3e-06; 
; Mismatches 0;
                                          WA,
                                                                                                                                                                              modified with and linked to
                                                                                                                                                                                                                                                modified
                                                                                                                                                                                                                                                                                                                 modified with
                                                                                                                                                                                                                                                                                                                                                  modified
                                                                                                                                                                                                                                                                                                                                                                                   modified
                                          Duly
                                                                                                                                                                                                                       with
                                                                                                                                                                                                                                                                                with
                                                                                                                                                                                                                                                with
                                                                                                                                                                                                                                                                                                                                                  with
                                                                                                                                                                                                                                                                                                                                                                                   with
                                         s
                                                                                                                                                                              Trt
the
                                                                                                                                                                                                                                                                                                                                                 Trt
                                                                                                                                                                                                                                                                                                                                                                                  Bu
                                                                                                                                                                                                                       Bu
                                                                                                                                                                                                                                               t-butyloxycarbonyl
                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                  ם
                                           Laursen
                                                                                                                                                                                                                       (not
                                                                                                                                                                                                                                                                                                                  not
                                                                                                                                                                                                                                                                                                                                                                                   (not
                                                                                                                                                                                                                                                                                 not
                                                                                                                                                                             (not defined in
Tentagel resin"
                                                                                                                                                                                                                                                                                                                                                  (not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                           RA.
                                                                                                                                                                                                                        defined in
                                                                                                                                                                                                                                                                                 defined
                                                                                                                                                                                                                                                                                                                  defined in
                                                                                                                                                                                                                                                                                                                                                                                  defined
                                                                                                                                                                                                                                                                                                                                                  defined
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                   Ħ
                                                                                                                                                                                                                                                                                 ä
                                                                                                                                                                                                                                                                                                                                                  in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                 the
                                                                                                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                                                                                                                   the
                                                                                                                                                                                       the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
RESULT 12
ADC22292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC analyte (e.g. a protein and/or nucleic acid from a sample or aqueous and/or organic solvent) which comprises the precipitation of the combined by a protein and/or mucleic acid from a sample or aqueous combined by a plution of the precipitated biological analyte off the precipitation media or device. The method is referred to as the solid phase compression (spp) method is referred to as the solid phase compound libraries which are the purification of combinatorially-companies. It is also useful in sample preparation and companies. It is also useful in sample preparation and companies of the ether precipitation overcomes the campyrical preparative and process chromatography with monitoring by an companity of the ether precipitation method, such as handling of cambable ether and corrosive trifluoroacetic acid solutions, and the componition and manipulation of milligram amounts of precipitate. The method cambable automated without difficulty and provides convenience for multiple cample handling. The sequence presented is an example of a SPPE peptidyl-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                      New recombinant fusion protein comprising detection and first localization domains and a binding domain for the molecule of useful for detecting binding of a molecule of interest.
                                                                                                                                                                                                                                                                                                                                                                      localisation domain; binding domain; subcellular compartment localisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 15
                                                                                                                                                                                                      01-AUG-2001; 2001US-0309395P.
13-DEC-2001; 2001US-0341589P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADC22292 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example; Col 4; 16pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               extraction
                                                                                                    N-PSDB;
                                                                                                                                              Bright G,
                                                                                                                                                                                                                                                   01-AUG-2002; 2002WO-US024572
                                                                                                                                                                                                                                                                                 13-FEB-2003
                                                                                                                                                                                                                                                                                                              WO2003012068-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                Protein binding domain amino acid sequence SEQ ID NO:141.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             solid-phase extraction device, and eluting precipitated analyte from
                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                    recombinant fusion protein; fusion protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-DEC-2003 (first entry)
                                                                                                   2003-248174/24.
DB; ADC22293.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 SQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                            CELLOMICS INC.
                                                                                                                                              Premkumar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       discloses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       peptide; 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       77.1%;
                                                                                                                                              DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a method for the isolation of a biological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18
                                                                                                                                                Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 81;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA
                                                                                                                                              K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 6; Le..
J. 9.3e-06;
O;
                                                                                                                                                                                                                                                                                                                                                                                                     binding; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                           interest,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
```

Claim

8; SEQ ID NO 141; 101pp; English

0

```
RESULT 13
ADG78883
ID ADG78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CC detecting binding of a molecule of interest. (I) comprises: (a) a CC detection domain; (b) a first localisation domain, and (c) a binding CC domain for the molecule of interest. The detection domain, the first CC constituting the recombinant fusion protein for the molecule of interest constituting the recombinant fusion protein for detecting binding of a molecule of interest are operably linked. The binding domain for the molecule of interest is separated from the first localisation domain by 0 cmolecule of interest is separated from the first localisation domain by 0 cmolecule of interest both do not occur in a single non-recombinant protein with the same spacing as in the recombinant fusion protein for detecting binding of a molecule of interest. Also described:

(1) a recombinant expression vector comprising the nucleic acid control sequences operably linked to the recombinant nucleic acid control sequences operably linked to the recombinant nucleic acid control sequences operably linked to the recombinant nucleic acid control capression vector; (4) a kit for detecting binding of the molecule of interest. The recombinant fusion protein is cuseful for detecting binding of a molecule of interest. The recombinant fusion protein is binding of the molecule of interest. The recombinant fusion protein is not feature in the molecule of the molecule of interest. The recombinant fusion protein is not feature in the molecule of the molecule of interest. The recombinant fusion protein is not feature in the molecule of interest. The recombinant fusion protein sand enables the monitoring of biochemical events in live, infact or retain sand enables the monitoring of biochemical events in live, infact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
The present sequence is that of a peptide (PNC27) comprising amino acid residues 12-26 of human p53. The invention provides peptides corresponding to all or a portion ADG78884 ADG78885 of this sequence, the peptides being lethal to malignant or transformed cells when fused to a membrane-penetrating leader sequence. The peptides are thus useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; p53; cytostatic.
                                                                                                                                                                                                                            Claim 2; SEQ ID NO 1; 32pp; English.
                                                                                                                                                                                                                                                                                                                                                New peptides useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12-MAR-2002; 2002US-0363785P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2003105880-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human p53 protein peptide PNC27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-MAR-2004 (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UYNY ) UNIV NEW YORK STATE RES FOUND (PINC/) PINCUS M R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-MAR-2003; 2003WO-US007687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADG78883 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fixed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 present
                                                                                                                                                                                                                                                                                                         sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 PPLSQETFSDLWKLL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cells. The present sequence is used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPLSQETFSDLWKLL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                         of cell cycle
                                                                                                                                                                                                                                                                                                     for treatment of neoplastic diseases comprises amino ll cycle regulatory protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              describes a recombinant fusion protein (I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 81;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (residues 12-26).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9.3e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

밁 Ş

```
RESULT 14
ADN48957
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      អន្តិន្ត្រន្ត្រង្គ
     The present invention relates to peptides that are selectively lethal to malignant and transformed mammalian cells when fused to a membrane-penetrating leader sequence. The peptides are derived from the human p53 protein. Also disclosed are (i) a pharmaceutical composition comprising a tleast one of the peptides or its analogues or derivatives admixed with a pharmaceutical carrier, and (ii) a method of selectively killing malignant or neoplastic cells in a subject. The leader sequence is preferably located at the carboxy terminal end of the peptide, its analogue or derivative. The leader sequence comprises predominantly positively charged amino acid residues. The leader sequence is at least one of penetratin, Arg8, TAY of HIVI, D-TAY, R-TAY, SV40-NLS, COM CAG, P22N, Lambda N, Delta N, yeast PRP6, human U2AF, human C-FOS, human C-JUN, yeast GCN4 or p-vec. Selectively killing malignant or neoplastic cells in a subject on membrane-penetrating teader sequence is fused to the the peptide, where a membrane-penetrating teader sequence is fused to the carboxy terminal of the peptide, its analogue or derivative. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                New peptide fused to membrane-penetrating leader sequence and selectively lethal to malignant or transformed cells, useful ineoplastic or malignant cells, e.g. cancer cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-APR-2000; 2000US-0195102P
05-APR-2001; 2001US-00827683
12-MAR-2002; 2002US-0363785P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                treating neoplastic disease in an animal, preferably a human. Claimed methods of selectively killing manignant or neoplastic cells comprise administering the p53-derived peptide fused at its C-terminus to a membrane-penetrating leader sequence, such as the penetratin leader
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   membrane-penetrating sequence ADG78886.
                                                                                                                                                                                                                                                                                                   Claim 2; SEQ ID NO 1;
                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-203289/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Pincus MR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lethal peptide; malignant cell; transformed cell; membrane penetrating leader sequence; human; p53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-MAR-2003; 2003US-00386737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US2004038902-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            neoplastic cell; cytostatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADN48957;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADN48957 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (PINC/) PINCUS M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 PPLSQETFSDLWKLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPLSQETFSDLWKLL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; F
                                                                                                                                                                                                                                                                                                   9pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 81;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ).3e-06;
es 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cell death;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mammalian;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                    for
Bi b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

```
S X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
isolatable from seria and other bodily fluids of pancreatic cancer carcinoma-specific antigen 3C4-Ag; (3) an antibody or its binding portion carrinoma-specificity to pancreatic carcinoma specific antigen 3C4-Ag; (4) a murine hybridoma cell line that produces a monoclonal antibody or specifically immunoreactive with the 3C4-Ag antigen; (5) a monoclonal antibody mab3C4, secreted by the hybridoma cell line; (6) detecting ancreatic cancer in an animal subject, comprising; (a) contacting a cell, tissue, or fluid sample from the subject with (the binding portion of) an antibody that binds to 3C4-Ag; (b) detecting antibody-antigen complex in the sample; and (c) correlating the detection of elevated levels of antibody-antigen complex in the sample from the sample with the presence of pancreatic cancer; (7) a diagnostic kit for detecting; (a) the antibody or its binding portion specific for 3C4-Ag or its immunologically active the sinding portion; and (c) a label for detecting the antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 15
                                                                                                                                                                                                                                                                                        The present invention describes the pancreatic carcinoma-specific antigen 3C4-Ag in substantially purified form, which has a molecular weight of 4.5 kDa as determined by SDS-PAGE, and a pI on isoelectrofocusing of 4.5 -5.0. The antigen is unglycosylated or minimally glycosylated and is primarily localised on the surface of rat and human pancreatic cancer cells but is not detected in normal, non-proliferating cells. Also described: (1) a soluble pancreatic carcinoma-specific antigen 3C4-Ag having a molecular weight of 36-38 kDa as determined by SDS-PAGE which is isolatable from sera and other bodily fluids of pancreatic cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New pancreatic carcinoma-specific antigen 3C4-Ag primarily localized the surface of rat and human pancreatic cancer cells, but not detecte normal, non-proliferating cells, useful in diagnosis and treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2004065547-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Michl J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-JAN-2003; 2003US-0440699P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pancreatic cancer associated antigen related peptide SEQ ID NO:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADQ90921 standard; peptide; 15 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pancreatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-JAN-2004; 2004WO-US001196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UYNY ) UNIV NEW YORK STATE RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pancreatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity hes 15; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPLSQETFSDLWKLL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPLSQETFSDLWKLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bradu SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       carcinoma-specific antigen 3C4-Ag; pancreatic cancer;
cytostatic; immunotoxin; pancreatic cancer associated antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NO 1; 112pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hannan R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      77.1%; Score 81; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pincus MR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 8; L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                detected :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
밁
                                                                          Matches
                                                                                          Query Match
Best Local (
                                                                                                                                                                                                   (8) treating pancreatic cancer in a patient by administering an effective amount of an antibody or its binding portion which specifically binds to 3C4-Ag or its immunologically active fragment, where the antibody or binding portion is conjugated or linked to a therapeutic drug or texin; and (9) a pharmaceutical composition comprising the antibody or its binding portion, and a carrier. The pancreatic carcinoma-specific antigen 3C4-Ag has cytostatic activity, and can be used as an immunotoxin. The antigen and methods are useful for detecting and treating pancreatic cancer. The present sequence represents a pancreatic cancer associated antigen peptide, which is used in the exemplification of the present
                                                                                                                                                 Sequence 15
                                                                                            Local Similarity
                                                                          15;
                                     1 PPLSQETFSDLWKLL
 PPLSQETFSDLWKLL
                                                                                                                                                 AA;
                                                                          Conservative
                                                                                              100.0%;
 15
                                                                          0
                                                                                              Score 81;
Pred. No.
                                                                          Mismatches
                                                                                            DB 8; L
                                                                            0
                                                                                                              Length 15;
                                                                            Indels
                                                                          0,
                                                                          Gaps
                                                                            0
```

Search completed: July 5, 2006, 22:54:22 Job time : 194 secs

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length: 0 length: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              July 5, 2006, 23:00:16 ; Search time 181 Seconds (without alignments) 48.625 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2097797 seqs, 463214858 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-403-440A-2
105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Published_Applications_AA_Main:*

1: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
2: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
3: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US09_PUBCOMB.pep:*
4: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*
5: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLSQETFSDLWKLLPENG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.9 (c) 1993 - 2006 Biocceleration Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gapext
                            US-09-214-371-74
US-09-723-384-7
US-09-723-262A-1
US-09-723-262A-1
US-10-927-262A-1
US-10-927-262A-1
US-10-927-262A-1
US-10-927-262A-1
US-10-413-758-14
US-10-413-728-14
US-10-413-728-14
US-11-019-894A-1
US-11-019-894A-1
US-11-019-11-11-14
US-11-019-11-11-14
US-11-019-11-11-14
US-10-732-384-6
US-11-051-411-11-14
US-10-128-953-14
US-10-128-953-14
US-10-128-953-14
US-10-128-953-14
US-10-275-427A-13
US-10-609-217-13
US-10-609-217-13
US-10-609-217-13
US-10-632-388-13
US-10-651-723-13
US-10-651-723-143
US-10-651-723-143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          诘
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mode1
Sequence 74, Appl Sequence 7, Appli Sequence 7, Appli Sequence 1, Appli Sequence 11, Appli Sequence 11, Appli Sequence 11, Appli Sequence 14, Appli Sequence 14, Appli Sequence 14, Appli Sequence 6, Appli Sequence 6, Appli Sequence 1109, Appli Sequence 1109, Appli Sequence 1109, Appli Sequence 1109, Appli Sequence 11, Appli Sequence 11, Appli Sequence 13, Appli Sequence 113, Appli Sequence 114, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
    Sequence 74, Application US/10927262A
Publication No. US/20050137137A1
GENERAL INFORMATION:
APPLICANT: LANE, DAVID P
APPLICANT: BOTTGER, VOLKER
APPLICANT: BOTTGER, VOLKER
APPLICANT: PICKSLEY, STEVEN M.
APPLICANT: HOCKKEPPEL, HEINZ-KURT
APPLICANT: GARCIA-EGIEVERRIA, CARLOS
APPLICANT: CHENE, PATRICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Lane, David
APPLICANT: Bottger, Volker
APPLICANT: Bottger, Nangelica
APPLICANT: Bottger, Angelica
APPLICANT: Bottger, Angelica
APPLICANT: Picksley, Stephen
APPLICANT: Chene, Patrick
APPLICANT: Hochkeppel, Heinz-Kurt
APPLICANT: Farcia-Echeverria, Carlos
APPLICANT: Furet, Pascal
ITITLE OF INVENTION: Inhibitors of the Interaction of P53
FILE REFERENCE: 4-2037/A/PCT
CURRENT APPLICATION NUMBER: US/09/214,371B
CURRENT FILING DATE: 1999-03-26
PRIOR APPLICATION NUMBER: PCT/EP97/03549
PRIOR TILING DATE: 1997-07-04
NUMBER OF SEQ ID NOS: 83
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                    RESULT 2
US-10-927-262A-74
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: Description of Artificial Sequence:peptide
US-09-214-371-74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 1
US-09-214-371-74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: P.
SEQ ID NO 74
LENGTH: 18
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 74, Application U Patent No. US20010018511A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                               1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/09214371B
                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94.3%; Score 99;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                44υνυυ44υυωυπ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-645-761-143
US-10-666-696-131
US-10-666-696-133
US-10-653-048-133
US-10-653-048-143
US-10-645-784-131
US-10-645-784-131
US-10-927-262A-17
US-10-927-262A-24
US-10-927-262A-29
US-10-927-262A-39
US-10-939-943-3
US-10-939-943-3
                                                                                                                                                                                                                                                                                                                                                                                                                       ,
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 3; I
9.7e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P53 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 143, App
Sequence 131, App
Sequence 143, App
Sequence 131, App
Sequence 131, App
Sequence 143, App
Sequence 143, App
Sequence 143, App
Sequence 217, Appl
Sequence 38, Appl
Sequence 38, Appl
Sequence 39, Appl
Sequence 37, Appl
Sequence 37, Appl
Sequence 55, Appl
Sequence 55, Appl
Sequence 55, Appl
Sequence 55, Appl
Sequence 57, Appl
```

MDM2

Result No.

Score

Query Match

0

Gaps

0

Minimum DB Maximum DB

seq

Title: Perfect score:

Run on: OM protein -

Scoring table: Sequence:

```
US-09-732-384-7
; Sequence 7, Application US/09732384
; Patent No. US20020132977A1
; GENERAL INFORMATION:
                                                                                                              RESULT 4
US-10-754-457-9
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                          US-09-732-384-7
Sequence 9, Application US/10754457
Publication No. US20040161798A1
GENERAL INFORMATION:
APPLICANT: KODADEK, THOMAS
TITLE OF INVENTION: METHODS AND COMPOSITIONS COMPRISING CAPTURE AGENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Ver. 2.1 SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Ver. 3.2 SEQ ID NO 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Yuan, Zhi-Min
APPLICANT: Gu, Jide
APPLICANT: Gu, Jide
TITLE OF INVENTION: Inhibition of p53 Degradation
FILE REFERENCE: 21508-044
CURRENT APPLICATION NUMBER: US/09/732,384
CURRENT FILING DATE: 2000-12-07
PRIOR APPLICATION NUMBER: 60/169,816
PRIOR APPLICATION NUMBER: 60/169,816
PRIOR FILING DATE: 1999-12-08
NUMBER OF SEQ ID NOS: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -10-927-262A-74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: FURET, PASCAL
TITLE OF INVENTION: INHIBITORS OF THE INTERACTION BETWEEN P53 AND MDM2
FILE REFERENCE: 39749.0002 APC CON
CURRENT FILLORATION UNMBER: US/10/927,262A
CURRENT FILLING DATE: 2004-08-25
CURRENT FILLING DATE: 2004-08-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: GB 9614197.3
PRIOR FILING DATE: 1996-07-05
PRIOR APPLICATION NUMBER: GB 9707041.1
PRIOR FILING DATE: 1997-04-07
NUMBER OF SEQ ID NOS: 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 09/214,371
PRIOR FILING DATE: 1999-03-26
PRIOR APPLICATION NUMBER: PCT/EP97/03549
PRIOR FILING DATE: 1997-07-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Description of Artificial Sequence: Synthetic OTHER INFORMATION: Peptide
                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Description of Artificial Sequence:Protein OTHER INFORMATION: fragment not in inhibitory p53 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
nes 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19
                                                                                                                                                                                                                        2 PLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PPLSOETFSDLWKLLPEN 18
                                                                                                                                                                                               PLSQETFSDLWKLLPEN 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94.3%; Score 99; DB ilarity 100.0%; Pred. No. 9. Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                         87.6%; Score 92; DB 3; I
100.0%; Pred. No. 1.2e-06;
                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 5; Lo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                             Length 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
```

```
RESULT 6
US-10-155-059-13
; Sequence 13, Application US/10155059
; Publication No. US20020147173A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-927-262A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-754-457-9
                                                                                                                                                                                                                                                                                                                                    US-10-927-262A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: LANE, DAVID P
APPLICANT: BOTTGER, VOLKER
APPLICANT: BOTTGER, ANGELIKA
APPLICANT: BOTTGER, STEVEN M.
APPLICANT: HOCHKEPPEL, HEINZ-K
APPLICANT: GARCIA-ECHEVERRIA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/10/754,457
CURRENT FILING DATE: 2004-01-09
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn SEQ ID NO 1
                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application US/10927262A Publication No. US20050.37137A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1997-04-07
NUMBER OF SEQ ID NOS: 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 09/214,371
PRIOR FILING DATE: 1999-03-26
PRIOR APPLICATION NUMBER: PCT/EP97/03549
PRIOR FILING DATE: 1997-07-04
PRIOR APPLICATION NUMBER: GB 9614197.3
PRIOR APPLICATION NUMBER: GB 9707041.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: CHENE, PATRICK
APPLICANT: FURET, PASCAL
TITLE OF INVENTION: INHIBITORS OF THE INTERACTION BETWEEN P53 AND MDM2
FILE REFERENCE: 39749,0002 APC CON
CURRENT APPLICATION NUMBER: US/10/927,262A
CURRENT FILING DATE: 2004-08-25
CURRENT FILING DATE: 2004-08-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILE REFERENCE: UTSD:935US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 19
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 19
Jost, Christine TITLE OF INVENTION: METHODS OF TREATMENT USING
                                  APPLICANT: Kaelin, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION:
                                                                                                                                                                                                                                                           17;
                                                                                                                                                                                                         2 PLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 PLSQETFSDLWKLLPEN 18
                                                                                                                                                                                  PLSQETFSDLWKLLPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PLSQETFSDLWKLLPEN 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PICKSLEY, STEVEN M.
HOCHKEPPEL, HEINZ-KURT
GARCIA-ECHEVERRIA, CARLOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Description of Artificial Sequence: Peptide
                                                                                                                                                                                                                                                                           87.6%; Score 92;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 92;
Pred. No.
                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 4; L
. 1.2e-06;
                                                                                                                                                                                                                                                                             DB 5; L
1.2e-06;
                                                                                                                                                                                                                                                                                            Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           o
;
                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

NUMBER OF SEQUENCES: 27
CORRESPONDENCE ADDRESS:

NBS-1, ANTIBODIES AND PROTEINS THERETO, AND USES OF THE ANTIBODIES

ADDRESSEE: Nixon Peabody LLP STREET: 101 Federal Street

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; SEQUENCE DESCRIPTION: SEQ ID NO: 13: US-10-155-059-13
NUMBER OF SEQ ID NOS:
SOFTWARE: PatentIn V
SEQ ID NO 1
LENGTH: 19
                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/09214371B Patent No. US20010018511A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local (
                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                         APPLICANT: Hockkeppel, Heinz-Kurt
APPLICANT: Hockkeppel, Heinz-Kurt
APPLICANT: Garcia-Echeverria, Carlos
APPLICANT: Furet, Pascal
TITLE OF INVENTION: Inhibitors of the Interaction of P53 and MDM2
FILE REFERENCE: 4-20937/A/PCT
CURRENT APPLICATION NUMBER: US/09/214,371B
CURRENT FILING DATE: 1999-03-26
CURRENT FILING DATE: 1999-03-26
                                                                           PRIOR APPLICATION NUMBER: PCT PRIOR FILING DATE: 1997-07-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: Windows

SOFTWARE: FastSEQ for Windows Version 2.0b

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/155,059

FILING DATE: 24-May-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Eisenstein, Ronald I
REGISTRATION NUMBER: 30,628
REFERENCE/DOCKET NUMBER: 47400
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-345-6054
TELEFAX: 617-345-1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: «Unknown»
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/081,975
FILING DATE: 12-MAY-1998
APPLICATION NUMBER: 60/046,207
FILING DATE: 12-MAY-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 PPLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        h 85.7%;
Similarity 88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE: MA
COUNTRY: U
                                       PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLSQETFSELWNLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 19 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                Bottger, Volker
Bottger, Angelica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Boston
                                                                                                                                                                                                                                                            Picksley, Stephen
Chene, Patrick
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                            David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                PCT/EP97/03549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 90; DB 4;
Pred. No. 2.3e-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .3e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
GENERAL INFORMATION:
APPLICANT: Hupp, Theodore
APPLICANT: Dornan, David
TITLE OF INVENTION: Screening Method and Agents
FILE REFERENCE: 9013.54
CURRENT APPLICATION NUMBER: US/10/467,758
CURRENT FILING DATE: 2003-08-13
PRIOR APPLICATION NUMBER: PCT/GB02/00640
PRIOR FILING DATE: 2002-02-13
PRIOR APPLICATION NUMBER: GB 0103508.8
PRIOR APPLICATION NUMBER: GB 0103508.8
PRIOR APPLICATION NUMBER: GB 0103508.8
PRIOR FILING DATE: 2001-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-211-088-141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-467-758-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 8
US-10-467-758-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-214-371-1
                                                                     PRIOR APPLICATION NUMBER: 60/341,589
PRIOR FILING DATE: 2001-12-13
NUMBER OF SEQ ID NOS: 366
SOFTWARE: PatentIn version 3.1
SEQ ID NO 141
LENGTH: 15
                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Bright, Gary R.
APPLICANT: Premkunar, D. David
APPLICANT: Chen, Yih-Tai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 43
SOFTWARE: PatentIn version 3.1
SEQ ID NO 14
                                                                                                                                                                                                                                                                                                                                                                               Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 14, Application US/10467758 Publication No. US20040132108A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/211,088
CURRENT FILING DATE: 2002-10-15
PRIOR APPLICATION NUMBER: 60/309,395
PRIOR FILING DATE: 2001-08-01
                                                                                                                                                                                                                                                                  TITLE OF INVENTION: No. US20030104479A1el Fusion Proteins And Assays For Molecular B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 16
TYPE: PRT
ORGANISM: Homo sapiens
OTHER INFORMATION: Binding domain
               ORGANISM: Artificial sequence FEATURE:
                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE: OTHER INFORMATION: Description of Artificial Sequence:peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ocal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      al Similarity
16; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 PPLSQETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 PPLSQETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 PLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PLSOOTFSDLWKLLPEN 17
                                                                                                                                                                                                                                                                                                                                                                                                 Application US/10211088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                             US20030104479A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            83.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 88; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 89; DB 3;
Pred. No. 3.3e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.9e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
; FEATURE:
; OTHER INFORMATION: peptide; amino acid residues 12-26 of human p53 protein US-11-019-894A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 11
US-11-019-894A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; FEATURE: ; OTHER INFORMATION: The artificial sequence is US-10-425-970-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-425-970-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/10/425,970
CURRENT FILING DATE: 2003-04-30
PRIOR APPLICATION NUMBER: 09/581,472
PRIOR FILING DATE: 2000-08-14
PRIOR APPLICATION NUMBER: PCT/EP98/08560
PRIOR APPLICATION NUMBER: PCT/EP98/08560
PRIOR APPLICATION NUMBER: EP 97403051.2
PRIOR FILING DATE: 1997-12-15
PRIOR FILING DATE: 1997-12-15
PRIOR FILING DATE: 1997-12-15
PRIOR FILING DATE: 1997-12-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/11019894A Publication No. US20050245451A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 4, Application US/10425970 Publication No. US20040052794A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn version 3.0 SEQ ID NO 4
                                                                                                                          SOFTWARE: PatentIn version 3.2 SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                  APPLICANT: Pincus, Matthew R.

TITLE OF INVENTION: PEPTIDES SELECTIVELY LETHAL TO THE MALIGNANT AND TRANSFORMED TITLE OF INVENTION: WAMMALIAN CELLS

FILE REFERENCE: 1181-17 CIP A
CURRENT APPLICATION NUMBER: US/11/019,894A
CURRENT FILING DATE: 2004-12-21
PRIOR APPLICATION NUMBER: 10/386,737
PRIOR EPILING DATE: 2003-03-12
PRIOR FILING DATE: 2003-03-12
PRIOR FILING DATE: 2003-03-12
PRIOR FILING DATE: 2003-03-12
                                                                                                                                                                     PRIOR FILING DATE: 2002-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: FRADE, Raymond
TITLE OF INVENTION: p53 REGULATORY PROTEIN CALLED RB18A AND USES THEREOF
FILE REFERENCE: P06781US00/BAS
                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/195,102 PRIOR FILING DATE: 2000-04-05
                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 09/827,683 PRIOR FILING DATE: 2001-04-05
                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/363,785
                                              TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 15
TYPE: PRT
ORGANISM: Artificial
                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 PLSQETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 PPLSQETFSDLWKLL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PLSQETFSDLWKLLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLSQETFSDLWKLL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                         2002-03-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    77.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 81; DB 4; Length 15; pred. No. 4.1e-05; 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 81;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 4;
5. 4.1e-05;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
APPLICANT: Yuan, Zhi-Min
APPLICANT: Gu, JiJie
APPLICANT: Gu, JiJie
APPLICANT: Gu, JiJie
APPLICANT: Gu, JiJie
TITLE OF INVENTION: Inhibition of p53 Degradation
FILE REFERENCE: 21508-044
CURRENT APPLICATION NUMBER: US/09/732,384
CURRENT FILING DATE: 2000-12-07
PRIOR APPLICATION NUMBER: 60/169,816
PRIOR FILING DATE: 1999-12-08
PRIOR FILING DATE: 1999-12-08
NUMBER OF SEQ ID NOS: 10
SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Description of Artificial Sequence: ; OTHER INFORMATION: oligomer US-11-128-722-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 13
US-09-732-384-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-11-128-722-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 12
                                                                                                                       US-09-732-384-6
                                                                                                                                                                                                           ; SEQ ID NO 6
; LENGTH: 15
; TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: P
SEQ ID NO 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 14, App
Publication No.
                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 6, Application US/09732384 Patent No. US20020132977A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Arora, Paramjit
APPLICANT: Chapman, Ross
TITLE OF INVENTION: METHODS FOR PREPARING INTERNALLY CONSTRAINED PEPTIDES
TITLE OF INVENTION: AND PEPTIDOMIMETICS
FILE REFERENCE: 57953/1281
CURRENT APPLICATION NUMBER: US/11/128,722
CURRENT FILING DATE: 2005-05-13
PRIOR APPLICATION UMBER: 60/574,964
PRIOR FILING DATE: 2004-05-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                      FEATURE: OTHER INFORMATION: Description of Artificial Sequence:Protein OTHER INFORMATION: fragment not in inhibitory p53 polypeptide
                                                                                                                                                                                         ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 17
                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15;
                                                  14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 SQETFSDLWKLLPEN 18
5 QETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SQETFSDLWKLLPEN 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PPLSQETFSDLWKLL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/11128722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ilarity 100.0%;
Conservative 0;
                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US20060014675A1
                                                                     73.3%; Score 77;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77.1%; Score 81;
100.0%; Pred. No.
tive 0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              77.1%; Score 81; 100.0%; Pred. No.
                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 6; Luc...
O. 4.1e-05;
O;
                                                                                       DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 6; I
                                                                     0.00016;
                                                                                       Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic
                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

RESULT 14 US-11-051-411-1109 밁

QETFSDLWKLLPEN 14

```
PRIOR APPLICATION NUMBER: US/09/458,297
PRIOR PILLING DATE: 1999-12-10
PRIOR APPLICATION NUMBER: US 09/017,735
PRIOR FILLING DATE: 1998-02-03
PRIOR FILLING DATE: 1999-06-17
PRIOR FILLING DATE: 1999-06-17
PRIOR APPLICATION NUMBER: US 09/098,584
PRIOR FILLING DATE: 1998-06-17
NUMBER OF SEQ ID NOS: 1492
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-11-051-411-1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-11-051-411-1469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Fikes, John
APPLICANT: Sette, Aless
APPLICANT: Sidney, John
APPLICANT: Southwood, S
APPLICANT: Chesnut, Rot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1469, Application US/11051411 Publication No. US20050196403A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1109, Application US/11051411 Publication No. US20050196403A1 GENERAL INFORMATION:
       TITLE OF INVENTION: Inducing Cellular Immune Responses To TITLE OF INVENTION: p53 Using Peptide And Nucleic Acid Compositions FILE REFERENCE: 2060.0120000
CURRENT APPLICATION NUMBER: US/11/051,411
CURRENT FILING DATE: 2005-02-07
PRIOR APPLICATION NUMBER: US/09/458,297
PRIOR APPLICATION NUMBER: US 09/017,735
PRIOR FILING DATE: 1999-12-10
PRIOR FILING DATE: 1998-02-03
PRIOR FILING DATE: 1998-06-17
PRIOR APPLICATION NUMBER: PCT/US99/13789
PRIOR APPLICATION NUMBER: US 09/098,584
PRIOR APPLICATION NUMBER: US 09/098,584
PRIOR APPLICATION NUMBER: US 09/098,584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Celis, Esteban
APPLICANT: Keogh, Elissa
TITLE OF INVENTION: Inducing Cellular Immune Responses To
TITLE OF INVENTION: p53 Using Peptide And Nucleic Acid Compositions
FILE REFERENCE: 2060.0120000
FILE REFERENCE: 2060.0120000
                                                                                                                                                                                                                                                                                                                             APPLICANT: Celis, Esteban
APPLICANT: Keogh, Elissa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/11/051,411
CURRENT FILING DATE: 2005-02-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Fikes, John
APPLICANT: Sette, Alessandro
APPLICANT: Sidney, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 PPLSQETFSDLWKL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PPLSQETFSDLWKL 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Southwood, Scott
Chesnut, Robert
Celis, Esteban
Keogh, Elissa
                                                                                                                                                                                                                                                                                                                                                                         Sidney, John
Southwood, Scott
Chesnut, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                               Sette, Alessandro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   73.3%; Score 77;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 6; L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
```

```
밁
                         S
                                                                                                         ; OTHER INFORMATION: Synthetic Peptide US-11-051-411-1469
                                                                                                                                             SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 1469
LENGTH: 15
TYPE: PRT
ORGANISM: Artificial Sequence
                                                     Matches
                                                                Query Match
Best Local Similarity
                                                                                                                                      FEATURE:
                                                     14;
2 PPLSQETFSDLWKL 15
                1 PPLSQETFSDLWKL 14
                                                     Conservative
                                                    73.3%; Score 77;
100.0%; Pred. No.
Live 0; Mismatcl
                                                    Mismatches
                                                               DB 6; Length 15; 0.00016;
                                                     Indels
                                                     0
                                                    Gaps
```

0

Search completed: July 5, 2006, 23:04:06 Job time : 182 secs

THIS PAGE LEFT BLANK

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run on:
     110
111
112
113
113
114
115
116
117
117
118
118
119
119
123
123
123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seq
seq
     length: 0
length: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            July 5, 2006, 23:01:11 ; Search time 21 Seconds (without alignments) 24.277 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        112942 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 PPLSQETFSDLWKLLPENG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-403-440A-2
105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version
Copyright (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26832045 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gapext 0.5
US-10-953-613C-778
US-10-953-613C-790
US-10-953-613C-792
US-10-953-613C-792
US-10-953-613C-791
US-10-953-613C-791
US-10-953-613C-791
US-10-953-613C-793
US-10-953-613C-793
US-10-953-613C-894
US-10-953-613C-894
US-10-953-613C-895
US-11-196-917A-85
US-11-196-917A-85
US-11-195-953-613C-596
US-11-195-953-613C-596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Biocceleration Ltd
                                                                                                                                                                                                                                                                                                                                                             Sequence 778,
Sequence 790,
Sequence 780,
Sequence 792,
Sequence 779,
Sequence 779,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
                                                                                                                                                                        Sequence
Sequence
Sequence
                                                                                                                                                                                                                             Sequence
Sequence
Sequence
                     Sequence
Sequence
                                                         Sequence
Sequence
                                                                                              Sequence
Sequence
                                                                                                                                  Sequence
Sequence
                                                                                                                                                                                                                                                                                    Sequence
Sequence
                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                            Sequence
778, App
780, App
780, App
792, App
779, App
779, App
779, App
779, App
779, App
624, App
624, App
624, App
623, App
783, App
783, App
638, App
648, App
658, App
658, App
658, App
658, App
658
                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
   SEQ ID NO 790
LENGTH: 12
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loc
Matches
```

27 25.7 17 6 US-10-953-613C-907 26 24.8 10 7 US-11-196-917A-77 26 24.8 11 6 US-10-953-066-4 26 24.8 11 6 US-10-953-613C-995 26 24.8 11 6 US-10-953-613C-595 26 24.8 12 6 US-10-953-613C-596 26 24.8 12 6 US-10-953-613C-596 26 24.8 12 6 US-10-953-613C-596 27 28 12 6 US-10-953-613C-597 28 29 12 6 US-10-953-613C-598 29 29 10 7 US-11-134-871-317 29 20 20 20 20 20 20 20 20 20 20 20 20 20	25.7 17 6 US-10-95. 24.8 10 7 US-11-21. 24.8 11 6 US-10-95. 24.8 11 6 US-10-95. 24.8 11 6 US-10-95. 24.8 12 7 US-11-23. 23.8 11 7 US-11-13. 23.8 18 7 US-11-13.	45	44	<b>4</b> ω	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	0
. 7 17 6 US-10-95 8 10 7 US-11-21 8 11 6 US-10-95 8 11 6 US-10-95 8 12 7 US-11-13 8 11 7 US-11-13 8 18 7 US-11-13.	. 7 17 6 US-10-953-613C-907 . 8 10 7 US-11-219-63-29 . 8 10 7 US-11-196-917A-77 . 8 11 6 US-10-538-066-4 . 8 11 6 US-10-953-613C-595 . 8 12 6 US-10-953-613C-596 . 8 12 6 US-10-953-613C-596 . 8 12 6 US-10-953-613C-597 . 8 12 6 US-10-953-613C-597 . 8 12 6 US-10-953-613C-598 . 8 12 6 US-10-953-613C-598 . 8 12 6 US-10-953-613C-598 . 8 12 7 US-11-334-731-3124 . 8 12 7 US-11-334-871-3173 . 8 18 7 US-11-134-871-3598 . 8 18 7 US-11-334-871-379 . 8 19 7 US-11-334-871-379 . 9 10 6 US-10-953-613C-796 . 9 10 7 US-11-334-871-776	24	24	25	25	25	25	25	25	25	26	26	26	26	26	26	26	26	26	27	1.3
6 US-10-95. 6 US-11-21. 7 US-11-21. 7 US-11-25. 6 US-10-95. 6 US-10-95. 6 US-10-95. 6 US-10-95. 7 US-11-13. 7 US-11-13. 7 US-11-13. 7 US-11-13. 7 US-11-13.	6 US-10-953-613C-907 7 US-11-219-563-29 7 US-11-196-917A-77 6 US-10-953-613C-595 6 US-10-953-613C-595 6 US-10-953-613C-596 6 US-10-953-613C-597 6 US-10-953-613C-597 6 US-10-953-613C-598 7 US-11-34-871-3124 6 US-10-953-613C-588 6 US-10-953-613C-588 7 US-11-134-871-173 7 US-11-134-871-173 7 US-11-134-871-173 7 US-11-134-871-173 7 US-11-134-871-796 7 US-11-134-871-796 9 US-11-134-871-796 1 US-11-134-871-796 9 US-11-134-871-796 1 US-11-134-871-796 9 US-11-134-871-796 1 US-11-134-871-796 9 US-11-134-871-796 9 US-11-134-871-796 9 US-11-134-871-796 9 US-11-134-871-796																				٠
US-10-95 US-11-21 US-11-19 US-10-95 US-10-95 US-10-95 US-10-95 US-10-95 US-10-95 US-11-23 US-11-13 US-11-13 US-11-13 US-11-13	US-10-953-613C-907 US-11-219-63-29 US-11-196-917A-77 US-10-953-613C-595 US-10-953-613C-596 US-10-953-613C-597 US-10-953-613C-597 US-10-953-613C-598 US-10-953-613C-598 US-11-234-731-561 US-11-134-871-3124 US-10-953-613C-901 US-11-134-871-35-98 US-11-134-871-35-98 US-11-134-871-35-98 US-11-134-871-35-98 US-11-134-871-37-35-98 US-11-134-871-776 US-10-953-613C-778 US-11-134-871-778	10	10	19,	18	18	18	17	12	11	19	12	12	12	12	1	11	10	10	17	H
111-21 111-21 111-21 111-21 110-95 111-21 111-23 111-13 111-13 111-13 111-13 111-13 111-13 111-13 111-13 111-13 111-13 111-13 111-13	10-953-613C-907 111-219-563-29 111-156-917A-77 110-538-066-4 110-953-613C-595 110-953-613C-596 110-953-613C-596 110-953-613C-596 110-953-613C-598 111-234-731-561 111-34-871-3124 111-134-871-3598 111-234-731-292 111-234-731-292 111-234-731-292 111-34-871-776 110-953-613C-789	7	δ	7	7	7	7	σ	σ	7	7	ð	6	σ	0	σ	0	7	7	σ	c
	sequence	J.	-10-953-613C-	-871	-731	US-11-134-871-3598	US-11-134-871-173	US-10-953-613C-901	-10-953-613C-	3-11-134-871-312	3-11-23	-10-953-613C-5	-10-953-613C-	;-10-953-613C-	1-10-953-613C-	-10-953-613C-5	-10-538-066-	-11	-11-219-	-10-953-	-10-23-013C-V
907, 907, 907, 907, 907, 907, 907, 907,		?, Ap	App	-		•	App				App	App	App	App	App	App	Appli	Appl	App1	App	קייי

ALIGNMENTS

## PRIOR APPLICATION NUMBER: 60/507,231 PRIOR FILING DATE: 2003-09-30 NUMBER OF SEQ ID NOS: 1021 SOFTWARE: Patentin Ver 3.0 SEQ ID NO 778 LENGTH: 12 TYPEP ----US-10-953-613C-790 US-10-953-613C-778 US-10-953-613C-778 Sequence 790, Application US/10953613C Publication No. US20060127404A1 GENERAL INFORMATION: APPLICANT: Huang, Chichi; Heavner, George; Knight, David; Ghrayeb, John; Scallon; APPLICANT: Bernard; Nesspor; Thomas TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES FILE REFERENCE: CEN5038 NP CURRENT APPLICATION NUMBER: US/10/953,613C CURRENT FILING DATE: 2004-09-29 PRIOR APPLICATION NUMBER: 60/507,231 PRIOR APPLICATION NUMBER: 60/507,231 PRIOR APPLICATION NUMBER: 60/507,231 PRIOR FILING DATE: 2003-09-30 NUMBER OF SEQ ID NOS: 1021 SOFTWARE: Patentin Ver 3.0 Sequence 778, Application US/10953613C Publication No. US20060127404A1 GENERAL INFORMATION: Query Match FILE REFERENCE: CEN5038 NP CURRENT APPLICATION NUMBER: US/10/953,613C CURRENT FILING DATE: 2004-09-29 APPLICANT: Huang, Chichi;Heavner, George;Knight, David;Ghrayeb, John;Scallon;APPLICANT: Bernard;Nesspor; Thomas TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES ORGANISM: Homo sapiens TYPE: PRT Local $\vdash$ Ŋ l Similarity 12; Conserv QETFSDLWKLLP 16 Conservative 62.9%; Score 66; DB 100.0%; Pred. No. 0. tive 0; Mismatches 0.00056; DB 6; Length 12; Indels 0 Gaps

0

```
밁
                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 4
US-10-953-613C-792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-953-613C-790
RESULT 5
                                                                                                                                                                                          US-10-953-613C-792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-953-613C-780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-953-613C-780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE: CEN5038 NP
CURRENT APPLICATION NUMBER: US/10/953,613C
CURRENT FILING DATE: 2004-09-29
PRIOR APPLICATION NUMBER: 60/507,231
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 1021
SOFTWARE: PATENTIN Ver 3.0
SEQ ID NO 780
                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:

APPLICANT: Huang, Chichi; Heavner, George; Kniq
APPLICANT: Bernard; Nesspor; Thomas
TITLE OF INVENTION: HINGE CORE MIMETIBODIES,
FILE REFERENCE: CEN5038 NP
CURRENT APPLICATION UNMERER: US/10/953,613C
CURRENT FILLING DATE: 2004-09-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: Huang, Chichi; Heavner, George; Knight, David; Ghrayeb, John; Scallon;
APPLICANT: Bernard; Nesspor; Thomas
APPLICANT: Bernard; Nesspor; Thomas
TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES
                                                                                                                                                                                                                                                           SOFTWARE: PatentIn Ver 3.0 SEQ ID NO 792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 792, Application US/10953613C Publication No. US20060127404A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity Matches 12; Conser
                                                                                                                       Matches
                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 780, Application US/10953613C Publication No. US20060127404A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                        CURRENT FILING DATE: 2004-09-29
PRIOR APPLICATION NUMBER: 60/507,231
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                         TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 12
                                                                                                                                                                                                                                               ENGTH: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 OETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ហ
                                                                                     ហ
                                                                                                                                       Similarity
                                                                                     QETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QETFSDYWKLLP 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QETFSDLWKLLP 12
                                                    QETFSDYWKLLP 12
                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                     Chichi;Heavner, George;Knight, David;Ghrayeb, John;Scallon;
rd;Nesspor; Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 58.1%;
91.7%;
                                                                                                                                      58.1%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62.9%; Score 66; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 61;
Pred. No.
                                                                                                                     Score 61; DB 6; Pred. No. 0.003; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0.003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 6; Le
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                   COMPOSITIONS, METHODS AND USES
                                                                                                                                                      Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
```

```
; SOFTWARE: PatentIn Ver 3.0
; SEQ ID NO 779
; LENGTH: 12
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-953-613C-779
                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                             RESULT 7
US-10-538-066-624
                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-953-613C-779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-953-613C-791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-953-613C-791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/507,231
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 1021
SOFTWARE: PATENTIN Ver 3.0
SEQ ID NO 791
LENGTH: 12
                                                                                                                                                                        Sequence 624, Application Publication No. US2006009 GENERAL INFORMATION: APPLICANT: Epimmune Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 791, Applic Publication No. US20 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 779, Application US/10953613C Publication No. US20060127404A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Huang, Chichi; Heavner, George; Knight, David; Ghrayeb, John; Scallon; APPLICANT: Bernard; Nesspor; Thomas
TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES
FILE REFERENCE: CEMSO38 NP
CURRENT APPLICATION NUMBER: US/10/953,613C
CURRENT FILING DATE: 2004-09-29
PRIOR APPLICATION UNMBER: 60/507,231
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 1021
TITLE OF INVENTION: HLA-A1, -A2, -A3, -A24, -B:
TITLE OF INVENTION: Peptides and Compositions
FILE REFERENCE: 2060.0159C06
CCURRENT APPLICATION NUMBER: US/10/538,066
CCURRENT FILING DATE: 2005-06-09
PRIOR APPLICATION NUMBER: US 60/432,017
PRIOR PILING DATE: 2002-12-10
NUMBER OF SEQ ID NOS: 767
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Huang, Chichi; Heavner, George; Knight, David; Ghrayeb, John; Scallon; APPLICANT: Bernard; Nesspor; Thomas
TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES
FILE REFERENCE: CEN5038 NP
CURRENT APPLICATION NUMBER: US/10/953,613C
CURRENT FILING DATE: 2004-09-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                    11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11;
                                                                                                                                                                                                                                                                                                                                                                                           5 QETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 QETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                QPTFSDLWKLLP 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ÓPTFSDLWKLLP 12
                                                                                                                                                                                                                     Application US/10538066
o. US20060094649A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/10953613C o. US20060127404A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               57.1%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          57.1%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 60; DB 6;
Pred. No. 0.0042;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 60; DB 6;
Pred. No. 0.0042;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                      -B7, and -B44 Tumor Associated Antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
```

QPTFSDYWKLLP 12

```
US-10-953-613C-781

US-10-953-613C-781

Sequence 781, Application US/10953613C

Publication No. US20060127404A1

GENERAL INFORMATION:

APPLICANT: Huang, Chichi; Heavner, George; Knight, David; Ghrayeb, John; Scallon;

APPLICANT: Huang, Chichi; Heavner, George; Knight, David; Ghrayeb, John; Scallon;

APPLICANT: Bernard; HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES

TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES

FILE REFERENCE: CENSO38 NP

CURRENT APPLICATION UNMBER: US/10/953,613C

CURRENT FILING DATE: 2004-09-29

PRIOR RILING DATE: 2003-09-30

PRIOR FILING DATE: 2003-09-30
                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                             ; LENGTH: 12
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-953-613C-781
                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: Homo sapiens US-10-538-066-600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-538-066-600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Homo sapiens
US-10-538-066-624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 10
                                                                                                                                                                                NUMBER OF SEQ ID NOS: 1021
SOFTWARE: PatentIn Ver 3.0
SEQ ID NO 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 767
SOFTWARE: PatentIn version 3.2
SEQ ID NO 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Epimmune Inc.
APPLICANT: Epimmune Inc.
TITLE OF INVENTION: HEA-A1, -A2, -A3, -A24, -B7
TITLE OF INVENTION: Peptides and Compositions
FILE REFERENCE: 2060.015PC06
CURRENT APPLICATION NUMBER: US/10/538,066
CURRENT FILING DATE: 2005-06-09
PRIOR APPLICATION NUMBER: US 60/432,017
PRIOR FILING DATE: 2002-12-10
                                                   Matches
                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 600, A Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 10
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn version 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 11
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11;
                   S
                                                  10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 QETFSDLWKL 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 QETFSDLWKLL 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 QETFSDLWKLL 15
                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
QETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QETFSDLWKL 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/10538066 o. US20060094649A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         56.2%;
ilarity 100.0%;
Conservative
                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                 52.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52.4%;
                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 55; DB 6; Length 10; Pred. No. 0.019;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 59;
Pred. No.
                                                Score 55; DB 6;
Pred. No. 0.023;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 0.0054;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -B7,
                                                <u>ب</u>
                                                                             Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and -B44 Tumor Associated Antigen
                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ٥,
                                                                                                                                                                                                 맑
                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
```

```
RESULT 12
US-10-538-066-623
                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Homo sapiens US-10-538-066-353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
US-10-538-066-353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-953-613C-793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-953-613C-793
                Sequence 623, Application US/10538066
publication No. US20060094649A1
GENERAL INFORMATION:
APPLICANT: Epimmune Inc.
TITLE OF INVENTION: HLA-A1, -A2, -A3, -A24, -B7,
TITLE OF INVENTION: Peptides and Compositions
FILE REFERENCE: 2060.015PC06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Publication No. US20060094649A1
GENERAL INFORMATION:
APPLICANT: Epimmunner Inc.
TITLE OF INVENTION: HLA-A1, -A2, -A3, -A24, -B7, and -B44 Tumor Associated Antigen
TITLE OF INVENTION: Peptides and Compositions
FILE REFERENCE: 2060.015PC06
CURRENT APPLICATION NUMBER: US/10/538,066
CURRENT APPLICATION NUMBER: US 60/432,017
PRIOR APPLICATION NUMBER: US 60/432,017
PRIOR FILING DATE: 2002-12-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: CEN5038 NP
CURRENT APPLICATION NUMBER: US/10/953,613C
CURRENT FILING DATE: 2004-09-29
PRIOR APPLICATION NUMBER: 60/507,231
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 1021
SOFTWARE: Patentin Ver 3.0
SEQ ID NO. 793
                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 767
SOFTWARE: PatentIn version 3.2
SEQ ID NO 353
LENGTH: 9
                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                            Best Local
                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 793, Application US/10953613C Publication No. US20060127404A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local
CURRENT APPLICATION NUMBER: US/10/538,066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Huang, APPLICANT: Bernar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Huang, Chichi;Heavner, George;Knight, David;Ghrayeb, John;Scallon;APPLICANT: Bernard;Nesspor; Thomas
TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 12
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 QETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                          Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                  TFSDLWKLL 9
                                                                                                                                                                                                                                                        TFSDLWKLL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPTESDYWKLLP 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/10538066 o. US20060094649A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                    46.7%; 500
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               52.4%;
83.3%;
                                                                                                                                                                                                                                                                                                        s; Pred. No. 1e+
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 55; DB 6;
Pred. No. 0.023;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                            DB 6;
1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                            Length 9;
                                                          and -B44 Tumor Associated Antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 12,
                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
Sequence 622, Application US/10538066

Publication No. US20060094649A1

GENERAL INFORMATION:

APPLICANT: Epimmune Inc.

APPLICANT: Epimmune Inc.

TITLE OF INVENTION: HLA-A1, -A2, -A3, -A24, -B7, and -B44 Tumor Associated Antigen

TITLE OF INVENTION: Peptides and Compositions

FILE REFERENCE: 2060.015PC06

CURRENT APPLICATION NUMBER: US/10/538,066

CURRENT APPLICATION NUMBER: US/10/538,066

CURRENT FILING DATE: 2002-06-09

PRIOR APPLICATION NUMBER: US 60/432,017

NUMBER OF SEQ ID NOS: 767

SOFTWARE: PatentIn version 3.2

SEQ ID NO 622

TYPE: PRT

ORGANISM: Homo sapiens

US-10-538-066-622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 354, Application US/10538066
Publication No. US20060094649A1

GENERAL INFORMATION:
APPLICANT: Epimmune Inc.
TITIE OF INVENTION: HLA-A1, -A2, -A3, -A24, -B7, & TITLE OF INVENTION: HLA-A1, -A2, -A3, -A24, -B7, & TITLE OF INVENTION: HLA-A1, -A2, -A3, -A24, -B7, & TITLE OF INVENTION: HLA-A1, -A2, -A3, -A24, -B7, & TITLE OF INVENTION: HLA-A1, -A2, -A3, -A24, -B7, & TITLE OF INVENTION: HLA-A1, -A2, -A3, -A24, -B7, & TITLE OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & TITLE OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & TITLE OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & CURRENT OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & CURRENT OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & CURRENT OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & CURRENT OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & CURRENT OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & CURRENT OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & CURRENT OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & CURRENT OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & CURRENT OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & CURRENT OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & CURRENT OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & CURRENT OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & CURRENT OF INVENTION: HALA-A1, -A2, -A3, -A24, -B7, & CURRENT ON HALA-A1, -A2, -A3, -A24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Thes 8; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-538-066-622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Homo sapiens US-10-538-066-354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-538-066-354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo sapiens US-10-538-066-623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT FILING DATE: 2005-06-09
PRIOR APPLICATION NUMBER: US 60/432,017
PRIOR FILING DATE: 2002-12-10
NUMBER OF SEQ ID NOS: 767
SOFTWARE: PatentIn version 3.2
SEQ ID NO 623
LENGTH: 10
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local (
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 9
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40.0%;
Local Similarity 87.5%;
nes 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TYSDLWKL 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 TFSDLWKL 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PPLSQETF 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLSQETF 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
35.2%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41.0%; Score 43; DB 6; 100.0%; Pred. No. 1.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
Score 37;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 42; DB 6;
Pred. No. 1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 6;
DB 6;
1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -B7,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and -B44 Tumor Associated Antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
밁
                                                                                                                                                                                                          ; ORGANISM: Homo sapiens US-10-953-613C-777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 15
US-10-953-613C-777
Search completed: July 5, 2006, 23:04:32 Job time : 22 secs
                                                                     밁
                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:

GENERAL INFORMATION:
APPLICANT: Huang, Chichi; Heavner, George; Knight, David; Ghrayeb, John; Scallon;
APPLICANT: Bernard; Nesspor; Thomas
TITLE OF INVENTION: HINGE CORE MIMETIBODIES, COMPOSITIONS, METHODS AND USES
FILE REFERENCE: CENSO38 NP
CURRENT APPLICATION NUMBER: US/10/953,613C
CURRENT FILING DATE: 2004-09-29
PRIOR FILING DATE: 2004-09-29
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 1021
                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Ver 3.0
SEQ ID NO 777
LENGTH: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 777, Application US/10953613C Publication No. US20060127404A1
                                                                                                                                         Matches
                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                             TYPE: PRT
                                                                                                      7 TFSDLW 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 PPLSQET 7
                                                                                                                                       6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7; Conservative
                                                                     TESDLW 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPLSQET
                                                                                                                                         Conservative
                                                                                                                                                       34.3%;
                                                                                                                                       Score 36; DB 6; pred. No. 1e+05; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                        Length 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                          Indels
                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

()

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match
                                                                                                                                                                                                                                                                                                                                                          No.
     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq
     length: 0
length: 19
                                                                                                                                                                                                                                                                                                                                                     Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             July 5, 2006, 22:59:36 ; Search time 50 Seconds
(without alignments)
33.262 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Issued Patents AA:*

1: /EMC_Celerra_SIDS3/ptodata/2/iaa/5_COMB.pep:*

2: /EMC_Celerra_SIDS3/ptodata/2/iaa/6_COMB.pep:*

3: /EMC_Celerra_SIDS3/ptodata/2/iaa/7_COMB.pep:*

4: /EMC_Celerra_SIDS3/ptodata/2/iaa/H_COMB.pep:*

5: /EMC_Celerra_SIDS3/ptodata/2/iaa/PCTUS_COMB.pep:*

6: /EMC_Celerra_SIDS3/ptodata/2/iaa/RE_COMB.pep:*

7: /EMC_Celerra_SIDS3/ptodata/2/iaa/RE_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               650591 segs, 87530628 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 PPLSQETFSDLWKLLPENG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-403-440A-2
105
    Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version 5.1.9
Copyright (c) 1993 - 2006 Biocceleration Ltd.
     멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapext 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0%
             US-09-732-384-7
US-09-081-975-13
US-09-581-472B-4
US-08-277-660A-1
US-08-277-660A-1
US-08-424-957-20
US-09-035-686-1
US-09-035-686-20
US-09-035-686-20
US-09-035-686-21
US-09-035-437A-8
US-09-695-437A-8
US-09-695-437A-2
                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     276470
Sequence 7, Appli
Sequence 13, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 2, Appli
Sequence 20, Appli
Sequence 20, Appli
Sequence 21, Appli
Sequence 21, Appli
Sequence 21, Appli
Sequence 23, Appli
Sequence 23, Appli
Sequence 24, Appli
Sequence 27, Appli
Sequence 28, Appli
Sequence 29, Appli
Sequence 31, Appli
Sequence 40, Appli
Sequence 64, Appli
                                                                                                                                                                                                                                                                                                                                                       Description
```

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27
59	59	59	59	60	60	60	60	61	61	61	62	62	62	65	65	65	65	65
56.2	56.2	56.2	56.2	57.1	57.1	57.1	57.1	58.1	58.1	58.1	59.0	59.0	59.0	61.9	61.9	61.9	61.9	61.9
11	11	11	11	18	15	12	12	15	12	12	15	15	15	15	15	15	15	15
N	2	_	۳	N	N	N	N	N	N	2	N	N	N	ហ	N	N	N	N
US-09-603-052-5	US-09-035-686-17	US-08-424-957-17	US-08-277-660A-9	US-09-081-975-22	US-09-695-437A-33	US-09-428-082B-144	US-09-428-082B-132	US-09-695-437A-13	US-09-428-082B-145	US-09-428-082B-133	US-09-695-437A-32	US-09-695-437A-21	US-09-695-437A-16	PCT-US95-02856-6	US-09-695-437A-11	US-09-950-692-6	US-09-511-204B-3	US-09-258-981-3
Sequence 5, Appli	Sequence 17, Appl	Sequence 17, Appl	Sequence 9, Appli	Sequence 22, Appl	Sequence 33, Appl	Sequence 144, App		Sequence 13, Appl	Sequence 145, App	Sequence 133, App	•	Sequence 21, Appl	Sequence 16, Appl	Sequence 6, Appli	Sequence 11, Appl	Sequence 6, Appli	Sequence 3, Appli	Sequence 3, Appli

ALIGNMENTS

```
GENERAL INFORMATION:
APPLICANT: Yuan, Zhi-Min
APPLICANT: Yuan, Zhi-Min
APPLICANT: Gu, JiJie
ITILE OF INVENTION: Inhibition of p53 Degradation
FILE REFERENCE: 21508-044
CURRENT APPLICATION NUMBER: US/09/732,384
CURRENT FILING DATE: 2000-12-07
PRIOR APPLICATION NUMBER: 60/169,816
PRIOR APPLICATION NUMBER: 60/169,816
PRIOR FILING DATE: 1999-12-08
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 7
                                                                                                                                                                                                                                                                       RESULT 2
US-09-081-975-13
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-732-384-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-732-384-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 1
                                                                                                                   PATENT NO. 6451979
GENERAL INFORMATION:
APPLICANT: Kaelin, William
APPLICANT: JOSE, Christine
TITLE OF INVENTION: METHODS OF TREATMENT USING
TITLE OF INVENTION: MBS-1, ANTIBODIES AND PROTE
TITLE OF INVENTION: ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                         Best Loc
Matches
                                                                                                                                                                                                                                    Sequence 13, Application US/09081975 Patent No. 6451979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 7, Application US/09732384 Patent No. 6831155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Description of Artificial Sequence:Protein OTHER INFORMATION: fragment not in inhibitory p53 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 19
ADUAL STREET: LC STREET: BOSTON MA
                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                     2 PLSQETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                 1 PLSOETFSDLWKLLPEN 17
                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
17; Conserv
                                                101 Federal Street
                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                    Nixon Peabody LLP
                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; +1
                                                                                                       27
                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 92; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2; L
                                                                                                                                          PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                            THERETO,
```

0

Gaps

0

AND USES

Q,

THE

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
밁
                                                                                                                                , OTHER INFORMATION: The artificial sequence is a nucleic acid. US-09-581-472B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-581-472B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-081-975-13
                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/09581472B Patent No. 6818744
GENERAL INFORMATION:
                                                                                                                                                                                                                                   SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local (
                                                                 Matches
                                                                               Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                   APPLICANT: FRADE, Raymond
TITLE OF INVENTION: p53 REGULATORY PROTEIN CALLED RB18A AND USES THEREOF
FILE REFERENCE: p66781US90/BAS
CURRENT APPLICATION NUMBER: US/09/581,472B
CURRENT FILING DATE: 2000-08-14
PRIOR APPLICATION NUMBER: PCT/EP98/08560
PRIOR APPLICATION NUMBER: PCT/EP98/08560
PRIOR FILING DATE: 1998-12-14
                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: EP 97403051.2
PRIOR FILING DATE: 1997-12-15
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS LENGTH: 19 amino acid
                                                                                                                                                                                TYPE: PRT
ORGANISM: Artificial
                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 47:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-345-6054
TELEPAX: 617-345-1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/0.
FILING DATE: 12-MAY-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows
SOFTWARE: FastSEQ for Windows Version 2.0b
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: amino a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/0:
FILING DATE: 12-MAY-1998
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
ZIP: 02110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Eisenstein, Ronald I
REGISTRATION NUMBER: 30,62
                                                             l Similarity
15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 PPLSQETFSDLWKLLPEN 18
                              2 PLSQETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              H: 19 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPLSQETFSELWNLLPEN 18
PLSQETFSDLWKLLP 15
                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             85.7%;
                                                                               77.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/09/081,975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/046,207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30,628
3ER: 47400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13:
                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Mismatches
                                                                               Score 81;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 90; DB 2;
Pred. No. 1.1e-07;
                                                                 Mismatches
                                                                               DB 2; L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 19;
                                                                                             Length 15;
                                                                 Indels
                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                               0
```

RESULT 4

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-277-660A-1
                                                                                                                                                                                                                                                                                                                                                                                 US-08-277-660A-4
                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TOPOLOGY:
US-08-277-660A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.0%; I
Marches 14; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application US/08277660A Patent No. 5702908
                                                                                                                                                                                                                                                                                                                                         Sequence 4, Application US/08277660A Patent No. 5702908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compartible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                COUNTRY: United States
ZIP: 94111-4187
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: A-TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 781-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Dreger, Walter H.
REGISTRATION NUMBER: 24,190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/
FILING DATE: 20-JUL-199
CLASSIFICATION: 514
                                                                                                                                                                                                NUMBER OF SEQUENCES: 27
CORRESPONDENCE ADDRESS:
ADDRESSEE: Flehr, Hohbach,
                                                                                                                                                                                                                                                  APPLICANT: Picksley, Steven M.
APPLICANT: Lame, David P.
TITLE OF INVENTION: Interruption of Binding
TITLE OF INVENTION: Protein and Therapeutic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Interruption of Binding TITLE OF INVENTION: Protein and Therapeutic NUMBER OF SEQUENCES: 27
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Picksley, Steven M. APPLICANT: Lane, David P.
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ELECOMMIC (415) 2
                                                                                                                                             CITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (***.
TELEFAX: 910 277299
TELEFAX: 910 277299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: Four Embarca
CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: United States ZIP: 94111-4187
                                                                                                                                                                             ADDRESSEE:
STREET: Fo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 QETFSDLWKLLPEN 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ហ
                                                                                                                                                              San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
                                                                                                                                         California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: Flehr, Hohbach, Four Embarcadero C
                                                                                                                                                                             Four Embarcadero
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-JUL-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               398-3249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/08/277,660A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Score 77; DB
%; Pred. No. 1e-
0; Mismatches
                                                                                                                                                                             h, Test, Albritton & Herbert
Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             n, Test, Albritton & Herbert
Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A-60244/WHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1;
. 1e-05;
                                                                                                                                                                                                                                                      of MDM2 and Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of MDM2 and
Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P53
Thereof
                                                                                                                                                                                                                                                      P53
Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

0,

APPLICATION NUMBER: US/08/277,660A FILING DATE: 20-JUL-1994

```
RESULT 6
US-08-424-957-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-277-660A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No. 5//0...
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Picksley, Steven M.
APPLICANT: Lane, David P.
APPLICANT: Lane, David P.
TITLE OF INVENTION: Interruption of Binding of MDM2 and P53
TITLE OF INVENTION: Protein and Therapeutic Application Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 100. Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Dreger, Walter H.

REGISTRATION NUMBER: 24,190
REFERENCE/DOCKET NUMBER: A-60
TELECOMPUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
TELEFAX: (415) 398-3249
                                                                                    TELEX: 910 277299
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEX: 910 277299
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DDS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/424,957
                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/277,660
FILING DATE: 20-UTL-1994
ATTORNEY/AGENT INFORMATION:
                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
                                                                                                                     NAME: Dreger, Walter H.
REGISTRATION NUMBER: 24,190
REFERENCE/DOCKET NUMBER: A-61228/WHD
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
TELEFAX: (415) 398-3249
                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: FO
TOPOLOGY:
                  STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: 1i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94111-4187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 PPLSQETFSDLWKL 14
                                 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/08424957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PPLSQETFSDLWKL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   E: Flehr, Hohbach, Test, Albritton & Herbert Four Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15 amino acids
unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                       19-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73.3%; Su
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .<u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A-60244/WHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 77;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1; L.
o. 1e-05;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
```

```
; Sequence 1, Application US/09035686
; Patent No. 6153391
; GENERAL INFORMATION:
APPLICANT: Picksley, Steven M.
APPLICANT: Lane, David P.
TITLE OF INVENTION: Interruption of TITLE OF INVENTION: Protein and TITLE OF SEQUENCES: 50
                                                                                                                                                 RESULT 8
US-09-035-686-1
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                          US-08-424-957-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-424-957-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 7
                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 20, Appli
Patent No. 5770377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                vuery match 73.3%; Score 77; DB 1;
Best Local Similarity 100.0%; Pred. No. 1e-05;
Matches 14; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (415) 398-324
TELEX: 910 277299
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Picksley, Steven M.
APPLICANT: Lane, David P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Dreger, Walter H.
REGISTARION NUMBER: 24,190
REFERENCE/DOCKET NUMBER: A-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 20-JUL-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: Flehr, Hohbach, Test, Albritton & Herbert STREET: Four Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: Interruption of Binding of MDM2 and P53
TITLE OF INVENTION: Protein and Therapeutic Application Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: (415)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 19
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
                                                                                                                                                                                                                                                                                                 14;
                                                                                                                                                                                                                            N
                                                                                                                                                                                                                                                   1 PPLSQETFSDLWKL 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 QETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94111-4187
                                                                                                                                                                                                                                                                                                                                                                                                                              amino acid
                                                                                                                                                                                                                          PPLSOETFSDLWKL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QETFSDLWKLLPEN 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/08424957
                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              United States
                                                                                                                                                                                                                                                                                                                                                                                            unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       398-3249
   Interruption of Binding of MDM2 and P53
Protein and Therapeutic Application Thereof
50
                                                                                                                                                                                                                                                                                                73.3%; Score 77;
100.0%; Pred. No.
tive 0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US 08/277,660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/424,957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A-61228/WHD
                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                   DB 1;
. 1e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                  Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                 0
```

CORRESPONDENCE ADDRESS:

ADDRESSEE:

E: Flehr, Hohbach, Test, Albritton & Herbert Four Embarcadero Center, Suite 3400

```
멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-035-686-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-035-686-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                   sequence 20, Application US/09035686
Patent No. 6153391
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEX: 910 277299
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/
FILING DATE: 19-APR-1995
APPLICATION NUMBER: US 08/
FILING DATE: 20-JUL-1994
ATTORNEY/AGENT INFORMATION:
                                                  COMPUTER READABLE FORM:
MEDICIN TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version
CURRENT APPLICATION DATA
APPLICATION NUMBER: US/09/035,686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                APPLICANT: Picksley, Steven M.
APPLICANT: Lane, David P.
TITLE OF INVENTION: Interruption of Binding of MDM2 and P53
TITLE OF INVENTION: Protein and Therapeutic Application Thereof
NUMBER OF SEQUENCES: 50
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: A-61228/WHD TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 781-1989 TELEFAX: (415) 398-3249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: C
                                                                                                                                                                                                                            STREET: Four Embarca
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: Four Embarca
CITY: San Francisco
                    FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Dreger, Walter H. REGISTRATION NUMBER: 24
                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 QETFSDLWKLLPEN 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94111-4187
                                                                                                                                                                                          94111-4187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               California
: United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15 amino acids
                                                                                                                                                                                                                                                                  E: Flehr, Hohbach, Test, Albritton & Herbert
Four Embarcadero Center, Suite 3400
                                                                                                                                                                                                          United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 73.5°; Pr
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       73.3%; Score 77; DB 2; Length 15; 100.0%; Pred. No. 1e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          us 08/277,660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US 08/424,957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/09/035,686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24,190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                              #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
APPLICANT: Yuan, Zhi-Min
APPLICANT: Gu, JiJie
ITILE OF INVENTION: Inhibition of p53 Degradation
ITILE REFERENCE: 21508-044
CURRENT APPLICATION NUMBER: US/09/732,384
CURRENT FILING DATE: 2000-12-07
PRIOR APPLICATION NUMBER: 60/169,816
PRIOR FILING DATE: 1999-12-08
NUMBER OF SEQ ID NOS: 10
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 6
ILPNOTH: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                           RESULT 11
US-08-277-660A-5
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: Description of Artificial Sequence:Protein; OTHER INFORMATION: fragment not in inhibitory p53 polypeptide US-09-732-384-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
US-09-732-384-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TOPOLOGY: unknown US-09-035-686-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                     Sequence 5, Application US/08277660A
Patent No. 5702908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 6, Application US/09732384 Patent No. 6831155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                         Best
                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
              GENERAL INFORMATION:
APPLICANT: PicksLey, Steven M.
APPLICANT: Lane, David P.
TITLE OF INVENTION: Interruption of Binding
TITLE OF INVENTION: Protein and Therapeutic
NUMBER OF SEQUENCES: 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (415) 781-198
TELEPAX: (415) 398-3249
TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 19-APR-1995
APPLICATION NUMBER: US 08)
FILING DATE: 20-JUL-1994
ATTORNEY/AGENT INFORMATION:
NAME: Dreger, Walter H.
REGISTRATION NUMBER: 24,11
                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: A-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 100.0%; 1 les 14; Conservative 0;
                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                              5 QETFSDLWKLLPEN 18
|||||||||||||
1 QETFSDLWKLLPEN 14
                                                                                                                                                                                                                                                                                                       14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 PPLSQETFSDLWKL 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 PPLSQETFSDLWKL 15
                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          amino acid
                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                        73.3%; Score 77; DB 2; 100.0%; Pred. No. 1e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      73.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US 08/424,957
-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24,190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08/277,660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A-61228/WHD
                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 77;
Pred. No.
                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
. 1e-05;
                                 of MDM2 and Application
                                                                                                                                                                                                                                                                                                                                          Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 15;
                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>.</u>
                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                           0
```

ADDRESSEE:

```
US-08-424-957-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-277-660A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Dreger, Walter H.
REGISTRATION NUMBER: 24,190
REFERENCE/DOCKET NUMBER: A-60:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
TELEFAX: (415) 398-3249
TELEFAX: (415) 398-3249
INFORMATION FOR SEQ ID NO: 5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No. 5770377
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: ISM PC compatible
COMPUTER: ISM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/424,957
ATTORIEY AGENT INFORMATION:
NAME: Dreger, Walter H.
REGISTRATION NUMBER: 24,190
REFERENCE/DOCKET NUMBER: A-6
                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: Flahr, Hohbach, Test, Albritton & Herbert
STREET: Four Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Picksley, Steven M.
APPLICANT: Lane, David P.
TITLE OF INVENTION: Interruption of Binding of MDM2 and P53
TITLE OF INVENTION: Protein and Therapeutic Application Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: EMP PC -DOS/MS-DOS
SOFTMARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/277,660
FILING DATE: 20-JUL-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                CITY: San Francisco
STATE: California
                                                                                                                                      FILING DATE: 1
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/0
FILING DATE: 20-JUL-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: United ZIP: 94111-4187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                              94111-4187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l Similarity
14; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            San
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLSQETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/08424957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: Flehr, Hohbach, Test, Albritton & Herbert Four Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                              United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                      19-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        70.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/277,660A
    A-61228/WHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 74; DB 1;
Pred. No. 3e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A-60244/WHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
RESULT 13
US-09-035-686-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                     US-09-035-686-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-424-957-21
                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 21, Applicat Patent No. 6153391
GENERAL INFORMATION:
 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                       TELEFAX: (415) 398-324
TELEX: 910 277299
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                         FILING DATE: 20-JUL-1994
ATTORNEY/AGENT INFORMATION:
NAME: Dreger, Walter H.
REGISTRATION NUMBER: 24,190
REFERENCE/DOCKET NUMBER: A-61
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE: (415) 781-:
TELEFAX: (415) 398-32-
TELEX: 910 277299
INFORMATION FOR SEQ ID NO:
                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acide
                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/424,957
FILING DATE: 19-APR-1995
APPLICATION NUMBER: US 08/277,660
APPLICATION NUMBER: US 08/277,660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: FOUL CITY: San Francisco
STATE: California
****ired State
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 50
CORRESPONDENCE ADDRESS:
ADDRESSEE: Flehr, Hohbach, Test, Albritton & Herbert
STREET: Four Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
TELEFAX: (415) 398-3249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Picksley, Steven M. APPLICANT: Lane, David P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: Interruption of Binding of MDM2 and P53
TITLE OF INVENTION: Protein and Therapeutic Application Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                   ELECOPHIC (415) 7
                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: United States ZIP: 94111-4187
                                                                                                        STRANDEDNESS:
                                                                                                                          TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENGTH:
 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 PLSQETFSGLWKLLP 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 PLSQETFSDLWKLLP 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         n 70.5%;
Similarity 93.3%;
                                                                                                                    amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1, Application US/09035686
6153391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amino acid
 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                     unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                unknown
                                                                                                                                                                                                          398-3249
                70.5%;
                                                                                                                                        acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/09/035,686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
0
                                                                                                                                                                                                                                                               A-61228/WHD
                  Score 74; DB 2;
Pred. No. 3e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 74; DB 1;
Pred. No. 3e-05;
 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 15;
 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

В

15

```
Sequence 63, Application US/09695437A
Patent No. 6803203
GENERAL INFORMATION:
APPLICANT: Brookhaven Science Associates
APPLICANT: Anderson, Carl W
APPLICANT: Connelly, Margery A
TITLE OF INVENTION: DNA-PK Assay
FILE REFERENCE: BSA 01-02
CURRENT FILING DATE: 2000-10-24
PRIOR APPLICATION NUMBER: US/09/695,437A
PRIOR APPLICATION NUMBER: US/09/695,437A
PRIOR APPLICATION NUMBER: US/09/695,437A
PRIOR APPLICATION NUMBER: US/09/695,437A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
US-09-081-975-23
                                                                                                                                                                                                                                                            RESULT 15
US-09-695-437A-63
                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-081-975-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No. 6431...
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Kaelin, William
APPLICANT: Jost, Christine
APPLICANT: Jost, Christine
TITLE OF INVENTION: METHODS OF TREATMENT USING
TITLE OF INVENTION: MBS-1, ANTIBODIES AND PROTEINS THERETO, AND USES OF THE
TITLE OF INVENTION: ANTIBODIES
TITLE OF INVENTION: ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 23, Application US/09081975 Patent No. 6451979
                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/09/081,975
FILING DATE: 12-MAY-1998
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/046,207
FILING DATE: 12-MAY-1997
ATTORNEY/AGENT INFORMATION:
NAME: Eisenstein, Ronald I
REGISTRATION NUMBER: 30,638
REFERENCE/DOCKET NUMBER: 47400
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-345-6054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows
SOFTWARE: FastSEQ for Windows Version 2.0b
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 16 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 101 F
CITY: Boston
STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: US
ZIP: 02110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: 1i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 16 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 617-345-1300
                                                                                                                                                                                                                                                                                                                                                                            2 PLSQETFSDLWKLLPE 17
                                                                                                                                                                                                                                                                                                                                                                                                                                         13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                         h 70.5%; Score 74; DB 2; Similarity 81.2%; Pred. No. 3.2e-05;
                                                                                                                                                                                                                                                                                                                                                   PLSOETFEDLWSLLPD 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sss: single
linear
                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

```
Search completed: July 5, 2006, 23:00:59 Job time: 51 secs
                                                           밁
                                                                                     Ś
                                                                                                                                                                          , OTHER INFORMATION: DNA-PK synthetic substrate based on human US-09-695-437A-63
                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 08/132,284
PRIOR FILING DATE: 1993-10-06
NUMBER OF SEQ ID NOS: 64
SOFTWARE: PATENTIN VERSION 3.1
SEQ ID NO 63
LENGTH: 18
TYPE: PRT
                                                                                                                                 Best
                                                                                                                  Matches
                                                                                                                                             Query Match
                                                                                                                                                                                                      ORGANISM: Artificial Sequence FEATURE:
                                                                                                               y Match 70.5%;
Local Similarity 93.3%;
hes 14; Conservative
                                                                       2 PLSQETFSDLWKLLP 16
                                                        PLSQETFSGLWKLLP
                                                                                                                  0;
                                                                                                                                 Score 74;
Pred. No.
                                                                                                                     Mismatches
                                                                                                                                 DB 2; I
3.7e-05;
                                                                                                                                             Length 18;
                                                                                                                     Indels
                                                                                                                     ٥,
                                                                                                                                                                                           p53 residues 14-28
                                                                                                                   Gaps
```

0;